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L 42[illegible]-65
ACCESSION NR: AT 6[illegible]

Th[illegible] dogs we[illegible] exposed to decompression, and when typical symptoms of bend[illegible] occurre[illegible] (paralysis of the rear limbs), the indices described previously were recorded for 3--6 min; the animals were then given therapeutic recompression. In all, 187 tests were conducted with decompression and 24 with intravenously injected gases.

Changes in respiration and cardiac activity of unanesthetized dogs during decompression and artificial aeroembolism were essentially similar. Training the organism for artificial aeroembolism increases the resistance to decompression disruptions; training for decompression disruptions increases the resistance of the organism to intravenous injections of gases. Increasing the resistance of the organism to decompression in chronic experiments is based primarily on conditioning the reactions or the reactions of the respiratory and cardiovascular systems to aeroembolism.

The authors feel that the reaction of the organism to decompression and artificial aeroembolism is conditioned by the fact that defensive functional shifts are eliminated and protective functional shifts developed. It is also suggested that these protective reactions develop more rapidly than gas bubbles form in the blood. Orig. art. has 7 figures.

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ARSEN'YEVA, V.I.; GRAMENITSKIY, P.M.; YUROVA, K.S.

Comparative characteristic of the respiratory and circulatory reactions of unanesthesized dogs to decompression and artificial aeroembolism. Funk. org. v usl. izm. gaz. sredy 3:79-86 '64.
(MIRA 17:11)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSEN'YEVA, Ye.I. [reviewer]; KHOKHLOV, V. [author].

A pamphlet devoted to a woman physician ("Aleksandra Mikhailovna Kruglova" V.Khokhlov. Reviewed by E.I.Arsen'eva). Sov.zdrav. 12 no.6:60 N-D '53. (MLRA 6:11)

(Kruglova, Aleksandra Mikhailovna)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSEN'YEVA, Ye.I.

Dispensary services for the rural population. Gig.i san. 19:7:3-7 Jl '54. (MLRA 7:8)

1. Iz Instituta organizatsii zdravookhraneniia i istorii meditsiny imeni N.A.Semashko AMN SSSR.
(PUBLIC HEALTH,
*in Russia, dispensary serv. for rural population)
(RURAL CONDITIONS,
*in Russia, dispensary serv.)

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSEN'YEVA, Ye.I.

Evgraf Alekseevich Osipov, 1841-1904; 50th anniversary of his death. Sov.zdrav. 13 no.2:50-55 Mr-Ap '54. (MLRA 7:4)

1. Iz Instituta organizatsii zdravookhraneniya i istorii meditsiny im. N.A.Semashko Akademii meditsinskikh nauk SSSR (direktor - kandidat meditsinskikh nauk Ye.D.Ashurkov).
(Osipov, Evgraf Alekseevich, 1841-1904)

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

Subject : USSR/Medicine AID P - 2145

Card 1/1 Pub. 37 - 14/18

Author : Arsen'yeva, Ye. I., Scientific Worker

Title : All-Russian Conference on Dispensary Service for the Rural Population

Periodical: Gig. i san., 3, 54-55, Mr 1955

Abstract : Describes the work and resolutions of the Conference organized by the Ministry of Health, RSFSR, in Kursk, October 19-21, 1954, where 300 delegates from different regions and republics were present.

Institution: None

Submitted : No date

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSEN'YEVA, YE. I.

ARSEN'YEVA, Ye. I.: "The role of provincial physicians in the development of disease statistics (the history of Russian sanitary statistics)." Acad Med Sci USSR. Moscow, 1956.
(Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya Letopis, No 17, 1956

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSENT'YEVA, Yekaterina Ivanovna; CHURKINA, A.N., kand.geograf.nauk, nauchnyy red.; KOKLOVA, V.A., red.

[Discovery and exploration of America; recommended list of literature for the 6-8 grade students] Otkrytie i issledovanie Ameriki; rekomendatel'nyi ukazatel' literatury dlia uchashchikhsia 6-8 klassov. [Comp.by] E.I.Arsent'eva. Leningrad, 1960. 58 p. (MIRA 14:4)

1. Leningrad. Publichnaya biblioteka.
(Bibliography--America--Discovery and exploration)

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ARSEN'IEVA, Ye.M.

Brief news. Sov. zdrav. 13 no.3:58 My-Je '54. (MLRA 7:8)
(PUBLIC HEALTH, RURAL)

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSEN'YEVA, Ye.V.; PAVLOVA, I.V.

[Handbook on laboratory work in physics; section: Electricity] Rukovodstvo k laboratornym rabotam po fizike; razdel: Elektrichestvo. Sost. E.V.Arsen'yeva, I.V.Pavlova. Leningrad, 1962. 82 p. (MIRA 17:7)

1. Leningrad. Institut tochnoy mekhaniki i optiki. Kafedra fiziki.

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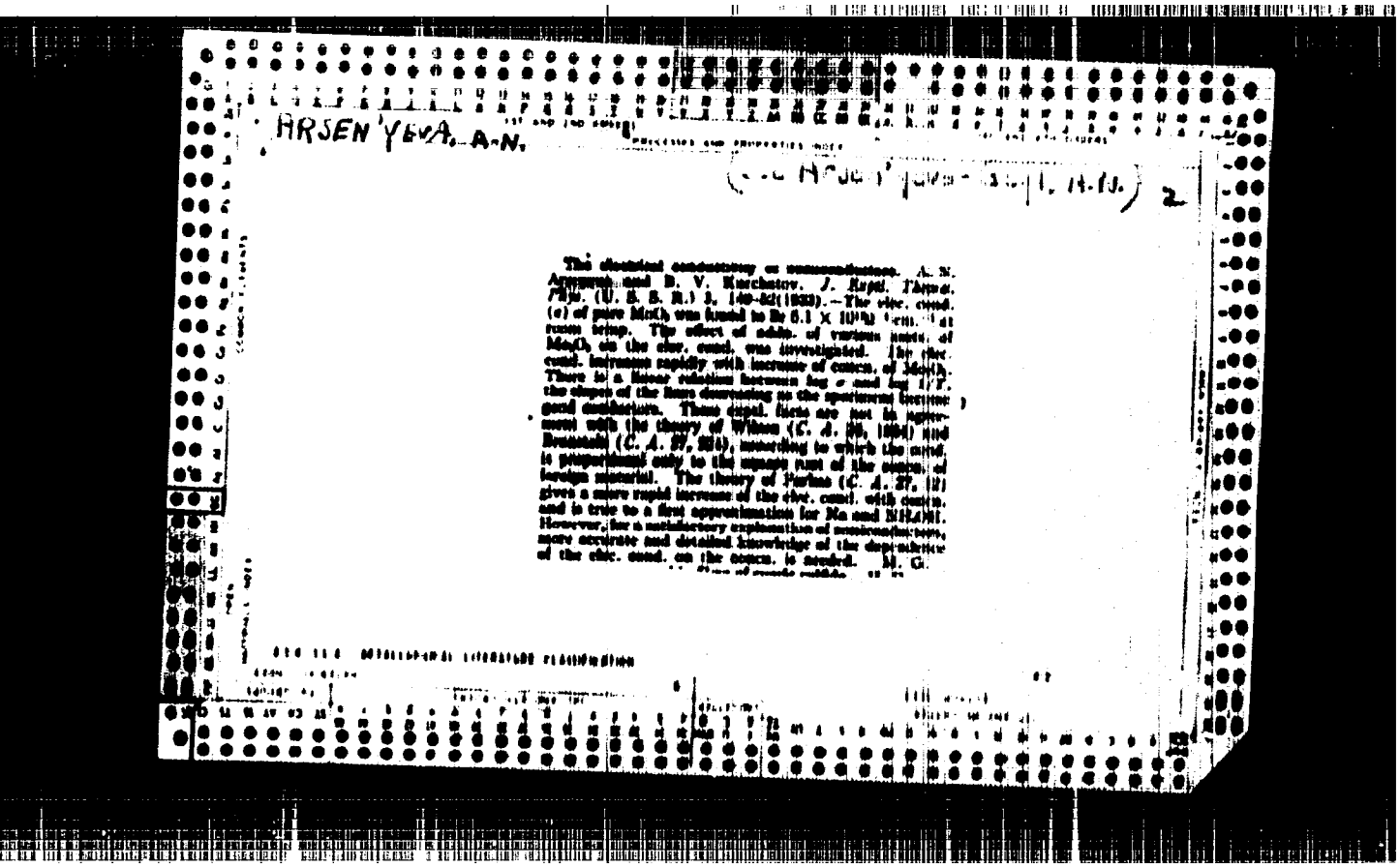

ARSEN'YEVA, A.N.

This doctoral conference on semiconductors. A. N. Arsen'yeva and B. V. Kurchatov. *J. Exptl. Theoret. Phys.* (U. S. S. R.) 3, 140-52(1933).—The elec. cond. (σ) of pure MnO_2 was found to be 6.1×10^{-9} ohm^{-1} cm.$^{-1}$ at room temp. The effect of addns. of various amts. of MnO_2 on the elec. cond. was investigated. The elec. cond. increases rapidly with increase of concn. of MnO_2. There is a linear relation between log σ and log $1/T$, the slopes of the lines decreasing as the specimens become good conductors. These exptl. facts are not in agreement with the theory of Wilson (*C. A.* 26, 1884) and Frenkel (*C. A.* 27, 2516), according to which the cond. is proportional only to the square root of the concn. of foreign material. The theory of Perlow (*C. A.* 27, 12) gives a more rapid increase of the elec. cond. with concn. and is true to a first approximation for Ni and Ni_2O_3. However, for a satisfactory explanation of semiconductors, more accurate and detailed knowledge of the dependence of the elec. cond. on the concn. is needed. M. G.

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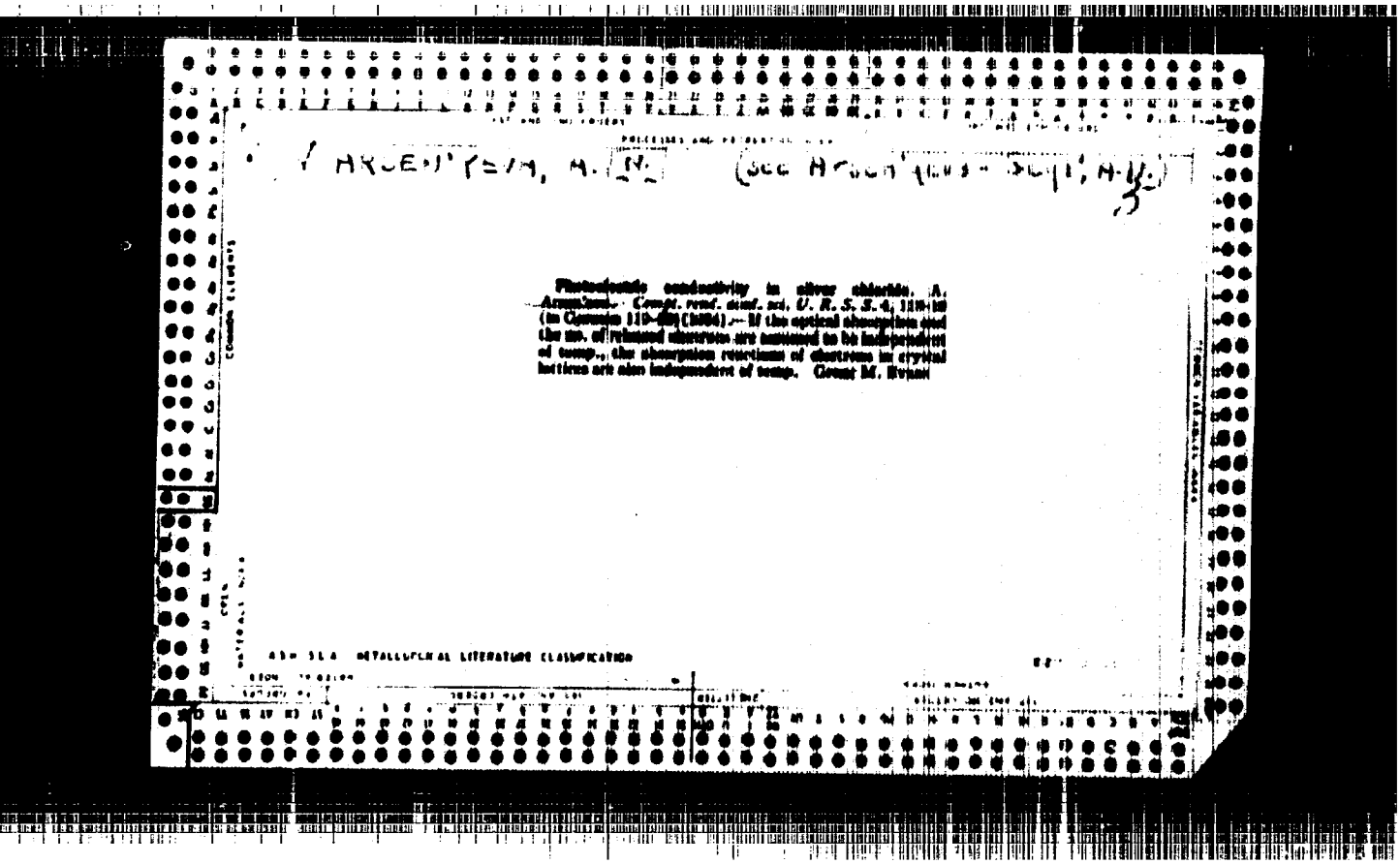

ARCEMPIEVA, A. M.

Photoelectric conductivity in silver chloride. A. Arcempieva. Compt. rend. acad. sci. U. R. S. S. 4, 119-21 (in German 119-20)(1934).—If the optical absorption and the no. of released electrons are assumed to be independent of temp., the absorption constant of electrons in crystal lattices are also independent of temp. Cecil M. Hyam

A59-SLA METALLURGICAL LITERATURE CLASSIFICATION

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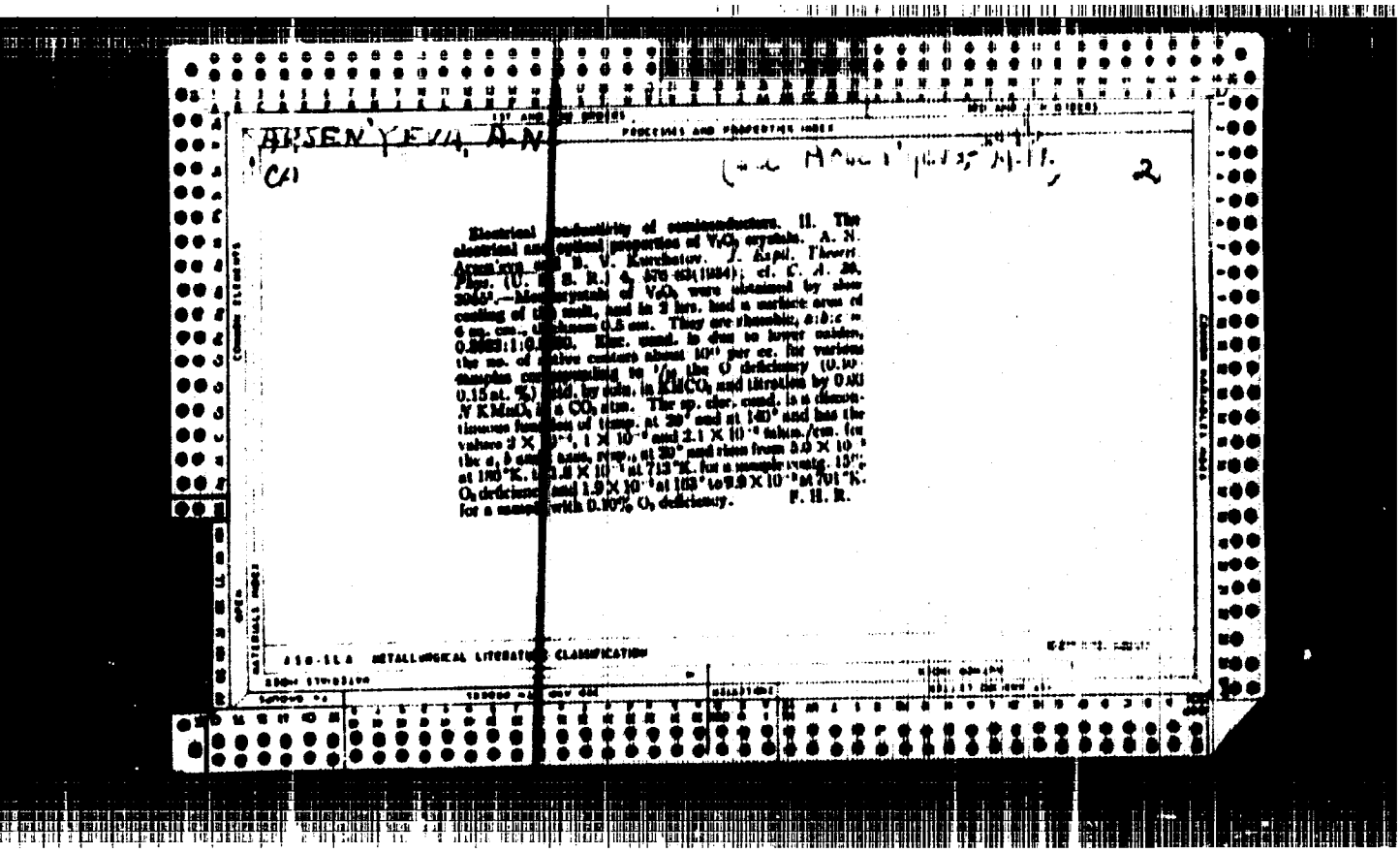

BUSEN'YEVA, A. N.

CA

2

Electrical conductivity of semiconductors. II. The electrical and optical properties of V_2O_5 crystals. A. N. Arsen'eva-Busen'eva and B. V. Kurchatov. *J. Appl. Theoret. Phys. (U. S. S. R.)* 4, 570-634(1934); cf. *C. A.* 28, 3045⁹.—Single crystals of V_2O_5 were obtained by slow cooling of the melt, heat in 2 hrs. had a surface area of 6 sq. cm., thickness 0.5 cm. They are rhombic, $a:b:c$ = 0.3563:1:0.[illegible]. Elec. cond. is due to lower oxides, the no. of which corresponds to $\frac{1}{10}$ the O deficiency (0.10-0.15 at. %) detd. by titn. in $KHCO_3$ and titration by 0.01 N $KMnO_4$ in CO_2 atm. The sp. elec. cond. is a discontinuous function of temp. at 20° and at 140° and has the values $3 \times$ [illegible], 1×10^{-4} and 2.1×10^{-4} mhos/cm. for the α, β and [illegible] forms, resp., at 20° and rises from 5.0×10^{-5} at 193°K. to 5.8×10^{-4} at 713°K. for a sample containing 15% O_2 deficiency and 1.9×10^{-4} at 193° to 9.9×10^{-4} at 701°K. for a sample with 0.10% O_2 deficiency. F. H. R.

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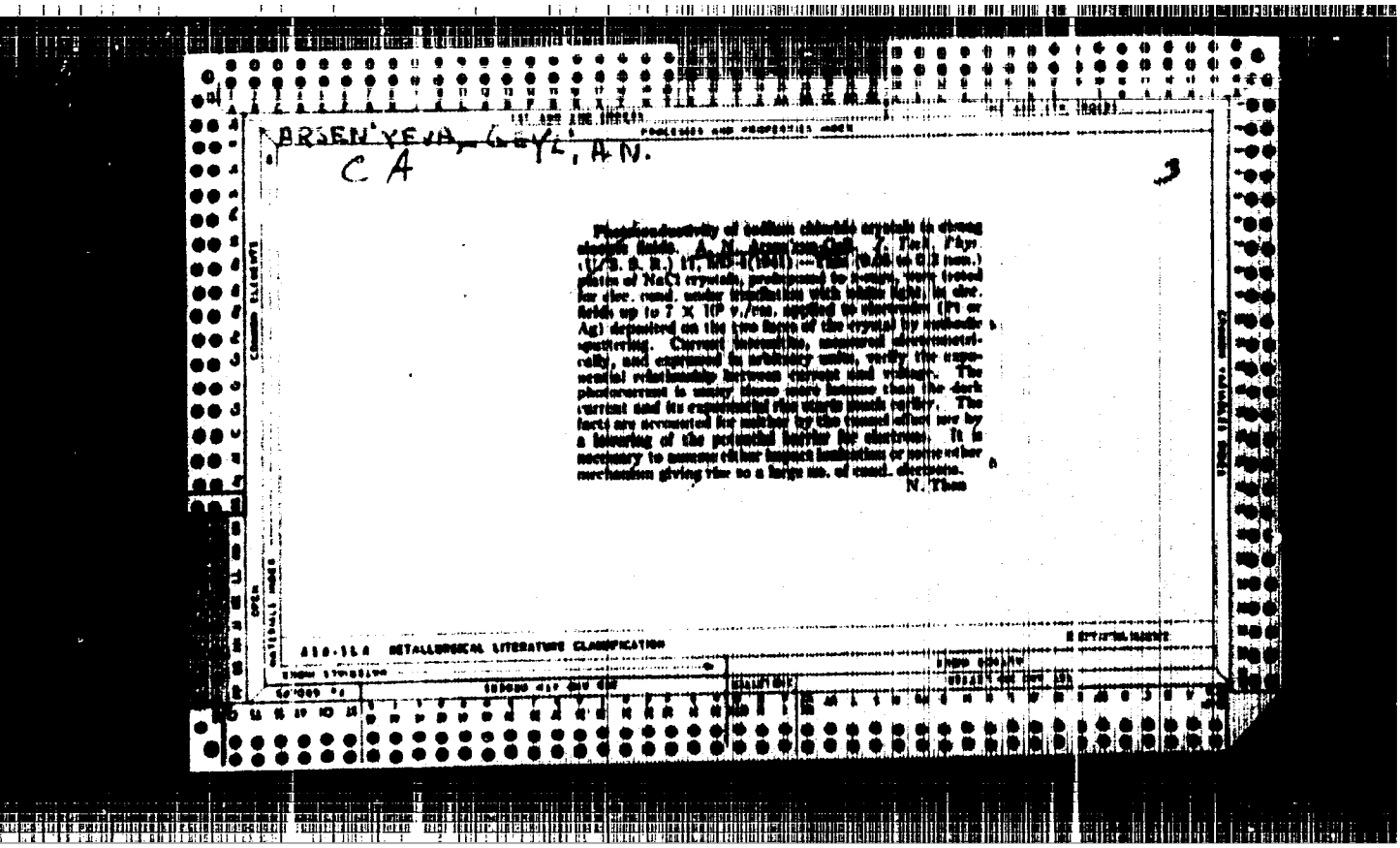

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Tensiometric properties of some semiconductors.
A. N. Arsen'yeva-Geil. Zhur. Tekh. Fiz. 17, 913-8 (1947).—MoS$_2$, WSe$_2$, PbS, Cu$_2$S, CuS, Sb$_2$Te$_3$, CdO, and WO$_3$, in the form of plates or evapd. films, show a linear dependence of the elec. resistance R on stress, with R falling with increasing stress in uniform compression, and increasing with it in extension. The changes are reversible and free from hysteresis. The "tensiometric sensitivity," $(\Delta R/R)(\Delta l/l)$, where l = length, is variable; 4.8_{-1} in various specimens of PbS it ranged from 7.6 up to 1954. Under the same conditions, Cu$_2$Te, Cu$_2$O, CuO, CdS, and Sb showed no effect. By and large, tensiometric sensitivity is greater in the defect-type semiconductors, and is absent or very unstable in electronic semiconductors. The alleged role of cracks is contradicted by the presence of the effect in evapd. films, where cracking is very unlikely. Samples made by grinding and recompression were less sensitive than originally. N. Thon

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ARSEN'YEVA-(EYL' A. N.

PA 35/49T86

Photoelectric Effect

Taking Semiconductors According to the Energy Distribution of Electrons," A. N. Arsen'yeva-Geyl', Leningrad Physicotech Inst, Acad Sci USSR, 4 pp

"DAN SSSR" Vol LXVII, No 1

Makes energy states of electrons in solids based on study of energy distribution of electrons emitted from semiconductors by light. Records the characteristics of the photocurrent for each material investigated and the voltage for various

USSR/Physics (Contd) Sep 48

wave lengths. From these characteristics, determined maximum speeds of the photoelectrons emitted, and calculated the work function. Presents results in three curves and a table for Cu, Ge, Cs, and silver. Submitted by Acad P. I. Lukirskiy, 10 Jun 48.

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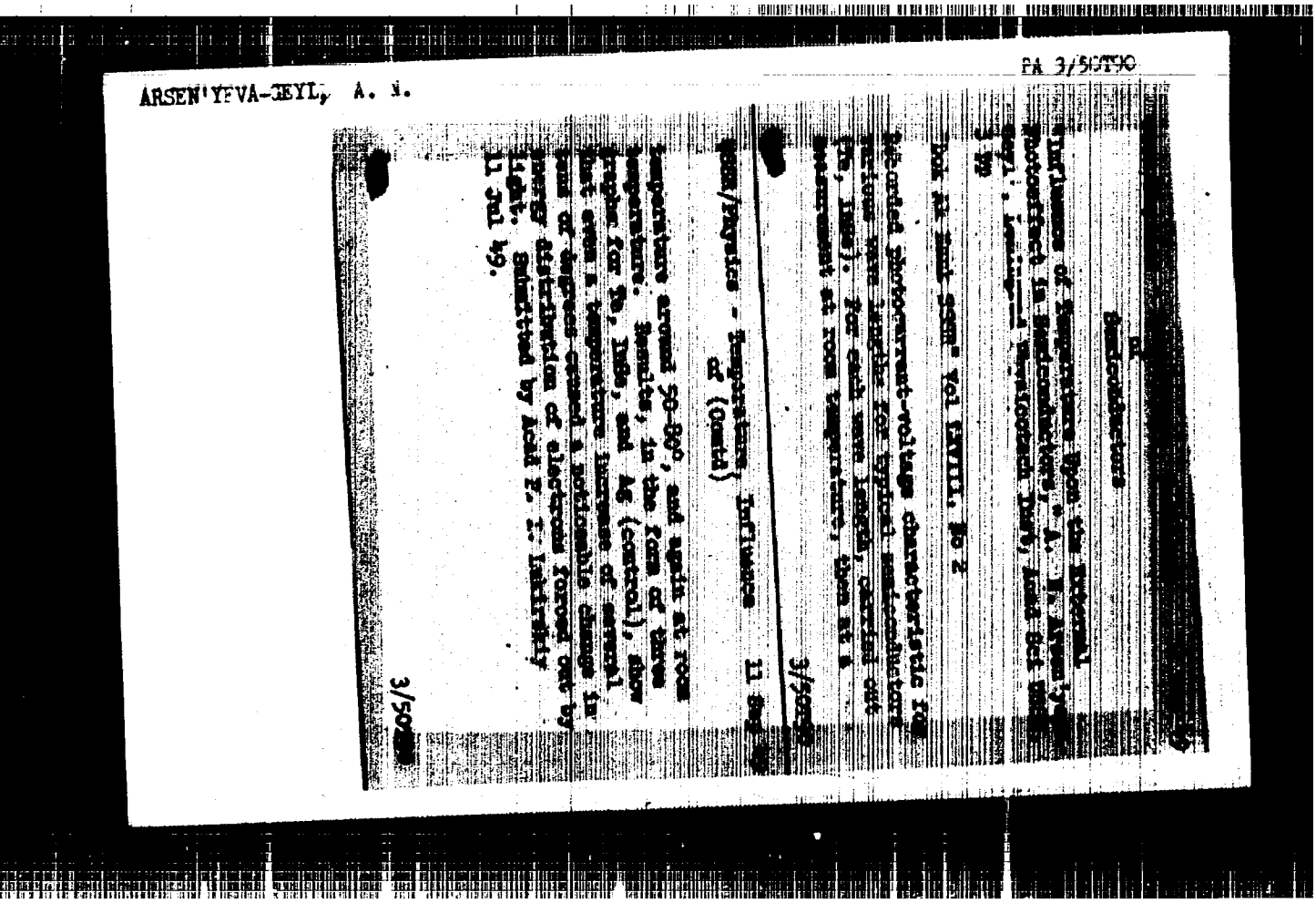

ARSEN'YEVA-ZEYL, A. I.

PA 3/50T90

Influence of temperature upon the thermal ...

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ARSEN'YEVA-GEYL', A. N.

USSR/Physics - Photoeffect, Semi-conductors Jan/Feb 52

"External Photoeffect of Semiconductors," A. N. Arsen'yeva-Geyl', Leningrad Phys-Tech Inst, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Fiz" Vol XVI, No 1, pp 122-126

External photoeffect facilitates study of int energy structure. For measurements of distribution of photoelectrons the method by P. I. Lukirskiy (cf. P. I. Lukirskiy, "Photoeffect" 1933) is used. External photoeffect of CdSe + Cd and germanium with various admixts and type of spectrum were investigated. Indebted to P. I. Lukirskiy.

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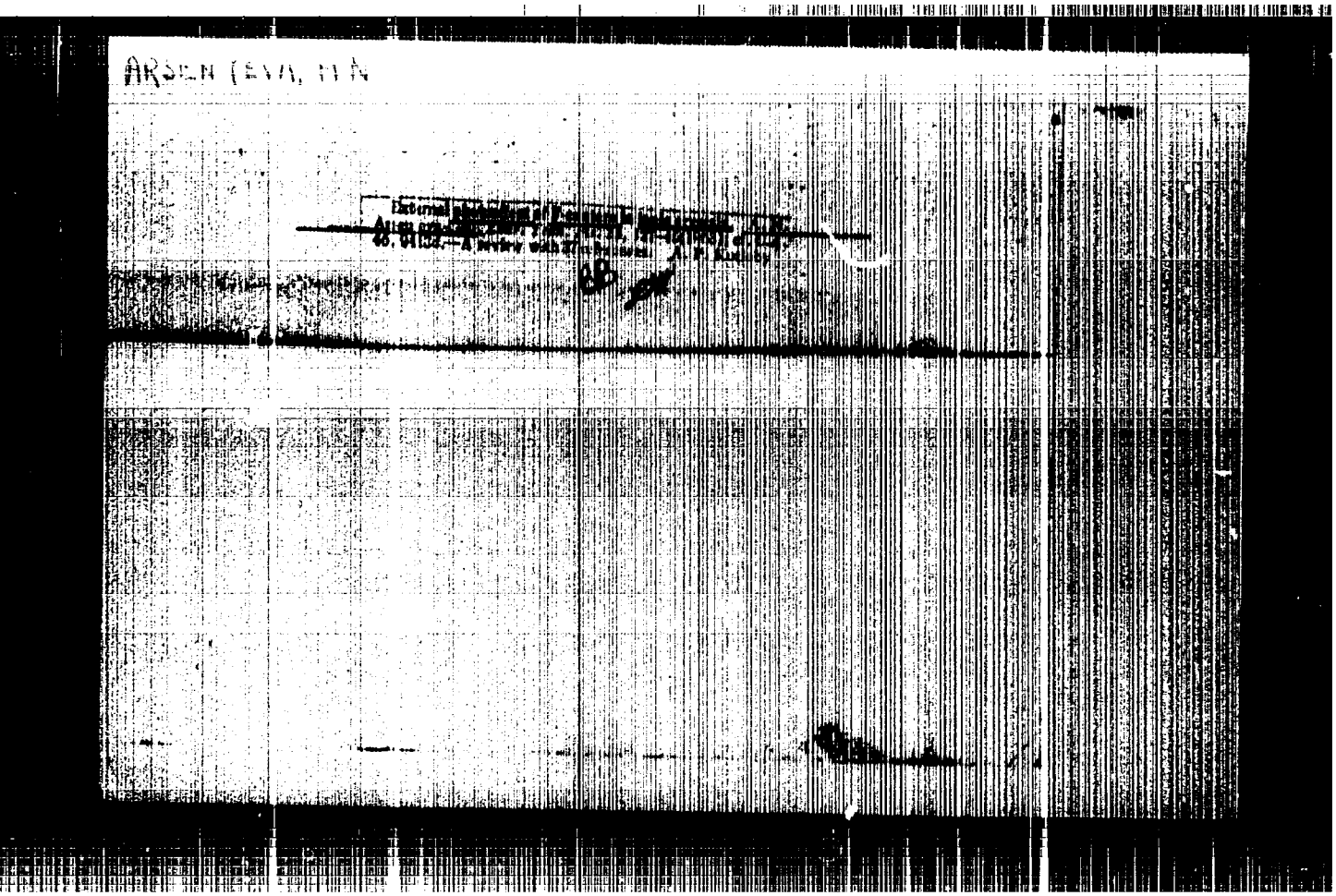

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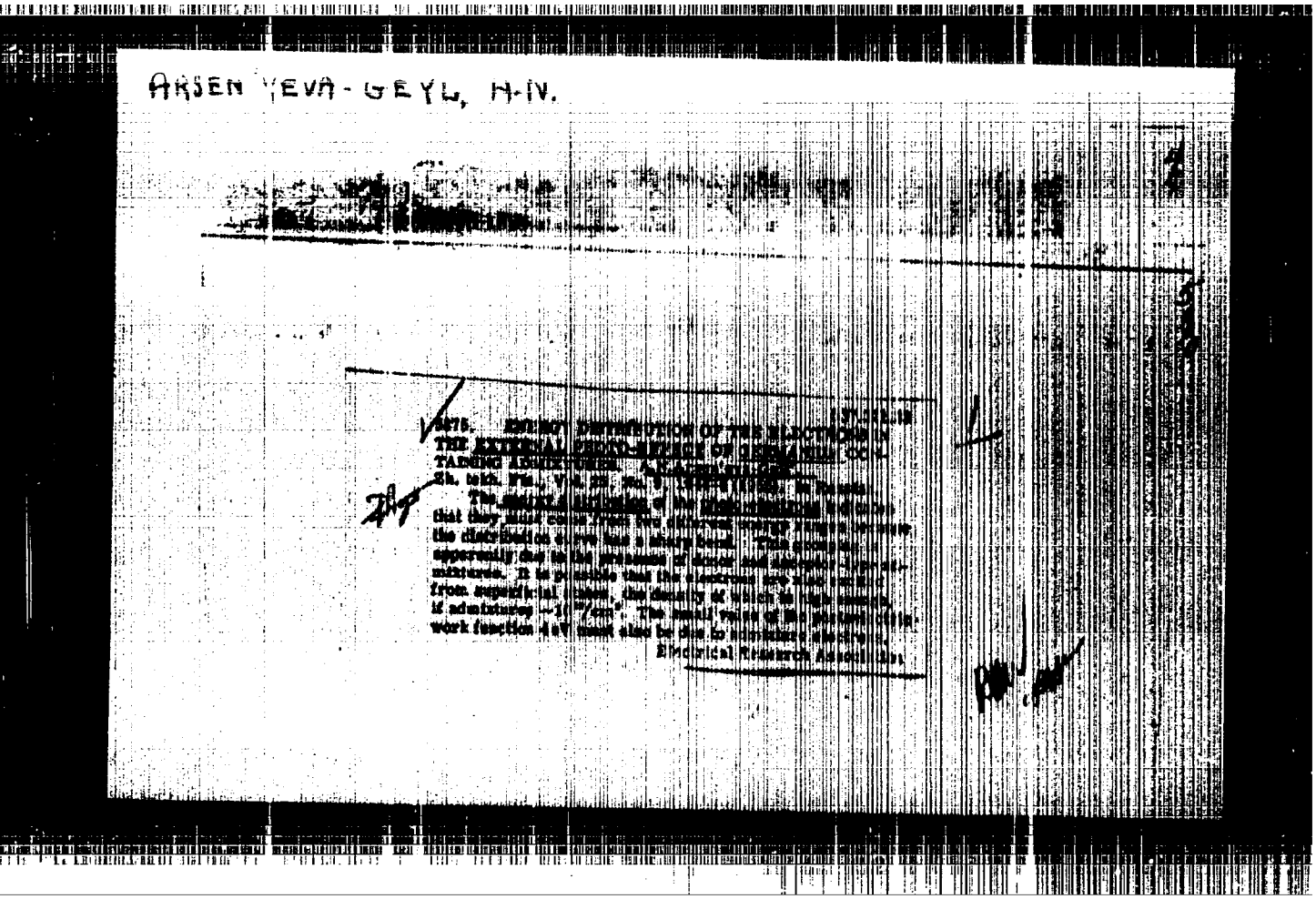

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PHASE I BOOK EXPLOITATION 1173

Arsen'yeva-Geyl', Agnesa Nikolayevna

Vneshniy fotoeffekt s poluprovodnikov i dielektrikov (Surface Photoelectric Effect From Semiconductors and Dielectrics) Moscow, Gostoptekhizdat, 1957. 221 p. 10,000 copies printed.

Ed.: Orlova, L.I.; Tech. Ed.: Volchok, K.M.

PURPOSE: This monograph is addressed to physicists and, in general, to those interested in solid state physics.

COVERAGE: This monograph is an attempt to acquaint the reader with the basic research on surface photoelectric effect from semiconductors and dielectrics conducted in the Soviet Union and abroad. The author claims that while in recent years considerable and very important theoretical material on surface photoelectric effect from nonmetals has been accumulated this material

Card 1/6

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has not appeared in the available literature. The scope of the present work is limited to a treatment of photoemission from the most elemental substances, i.e., from chemical elements and simple compounds among the semiconductors or dielectrics. Photoemission from coated cathodes and from liquids has not been discussed. Experimental conditions and methods of preparing emitters have been described in detail where possible. The author thanks Academician P.I. Lukirskiy (deceased), on whose initiative she undertook to write the book, Academician A.A. Lebedev, G. Ye. Pikus and Ye. Ya. Shreyder for reviewing the manuscript, and L.A. Osis and Z.P. Vasil'eva for their help in preparing the drawings and diagrams. There is an extensive bibliography; references appear at the end of each chapter.

TABLE OF CONTENTS:

Preface 7

Introduction 9

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

Photoelectric Effect from Semiconductors (Cont.) 1173

Ch. I. Theoretical Notions of Surface Photoelectric Effect From Semiconductors and Dielectrics

1. Energy spectrum of electrons in crystals 11
2. Local states 15
3. States of electron excitation 17
4. Absorption spectra caused by impurities and electrons in the excited state 19
5. Photoemission from an ideal semiconductor or dielectric 25
6. Photoemission from semiconductors containing impurities 32

Ch. II. Methods of Measurement

1. Retarding-field method in a spherical capacitor 38
2. Preparation of samples 43

Ch. III. Surface Photoelectric Effect From Semiconductors

1. Energy distribution of photoelectrons 47

Card 3/6

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

Photoelectric Effect from Semiconductors (Cont.) 1173

2. The N (E)/E function 72
3. Spectral distribution of photoemission output from semiconductors 75
4. Photoemission from amorphous arsenic 82
5. Photoemission from semimetals 86
6. General remarks on surface photoelectric effect from semiconductors and semimetals 91

Ch. IV. Surface States
1. Theoretical notions on energy states on the surface of a crystal 102
2. Some experimental results which can be explained by surface states 108
3. Effect of surface states on surface photoelectric effect from nonmetals 118

Ch. V. Surface Photoelectric Effect From Dielectrics

Card 4/6

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

Photoelectric Effect from Semiconductors (Cont.) 1173

1. Photoemission from pure insulating materials 123
2. Photoemission from color centers in alkali halide crystals 131
3. Some special properties of photoemission from color centers 137
4. Spectral distribution of photoemission output from color centers 142
5. Energy distribution of photoelectrons from F-centers 152
6. Surface photoelectric effect from F'-centers 159
7. Surface photoelectric effect from barium oxide 161

Ch. VI. Photoemission From Cesium Compounds Cs_3Sb and Cs_2Te

1. Photoemission from Cs_3Sb 176
2. Photoemission from Cs_2Te 190

Ch. VII. Effect of Impurities and Temperature on Surface Photoelectric Effect From Semiconductors and Dielectrics

Card 5/6

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

Photoelectric Effect from Semiconductors (Cont.) 1173

1. Effect of impurities 196
2. Effect of temperature 212

Conclusion 222

AVAILABLE: Library of Congress (QC715.A7)

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Card 6/6

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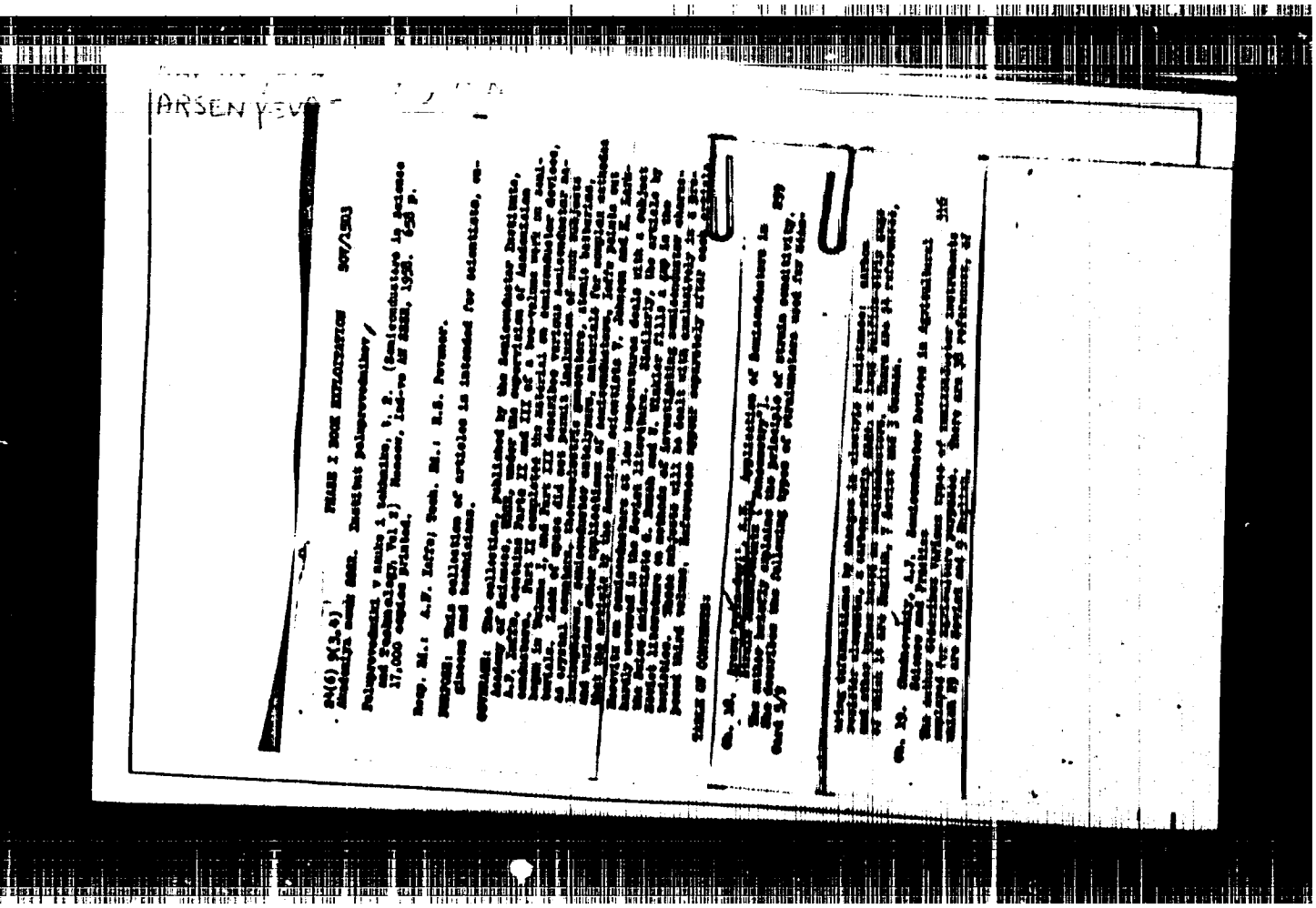

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ARSEN'YEVA-GEYL', A.N.; VAN BAO-KUN' [Wang Pao-k'un]

Some features of photoemission from indium arsenide. Fiz.tver.tela 3 no.5:1622-1623 My '61. (MIRA 14:6)

1. Laboratoriya poluprovodnikov Nauchno-issledovatel'skogo fizicheskogo instituta Leningradskogo gosudarstvennogo universiteta imeni A.A. Zhdanova.

(Photoelectricity) (Indium arsenide)

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S/181/61/003/012/009/028
B102/B108

9,4175 (1114, 1163)

AUTHORS: Arsen'yeva-Geyl', A. N., and Wang Pao-k'un

TITLE: Photoemission from gallium arsenide

PERIODICAL: Fizika tverdogo tela, v. 3, no. 12, 1961, 3621 - 3627

cf

TEXT: Photoemission from n- and p-type GaAs specimens of different carrier concentrations was studied by the method of the delayed field in a spherical capacitor. This capacitor, a glass sphere of 120 mm diameter, whose inner surface was coated with aquadag, served as a photoelectron collector. The emitter, placed inside, was not larger than $10 \cdot 6 \cdot 3$ mm^3, the vacuum was better than $5 \cdot 10^{-6}$ mm Hg. The exciting monochromatic light (ЗМР-3 (ZMR-3) mirror monochromator) came from a ПРК-2 (PRK-2) mercury lamp. The number of incident quanta was determined by means of a luminophor plus ФЭУ-18 (FEU-18) photomultiplier. A vacuum thermocouple designed by B. P. Kozyrev was used. The photocurrent was measured by a d-c amplifier of the type ЭМУ-3 (EMU-3) with a sensitivity of $4.4 \cdot 10^{-15}$ a/scale unit. The specimens supplied by Professor D. N. Nasledov and

Card 1/4

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B102/B108

Photoemission from gallium arsenide

O. V. Yemel'yanenko had the following characteristics:

Number	type	carrier concentr.	mobility ($cm^2/v \cdot sec$)
15 n	n	$4 \cdot 10^{15}$	1450
17 n	n	$3.5 \cdot 10^{17}$	1200
18 n	n	$6.5 \cdot 10^{18}$	-
19 n	n	10^{18}-10^{19}	-
16 p	p	$5 \cdot 10^{16}$	200

The parameters of the coarsely crystalline specimens were determined from Hall constant, conductivity, and sign of thermo-emf. The red edge $h\nu_0$ of photoemission was determined from the photoemission quantum yield $Y(h\nu)$ by extrapolating to $Y = 1 \cdot 10^{-8}$ el/quantum. It is 4.38, 4.30, 4.23, 4.24, and 4.36 ev (sequence of the specimens as in the table). The thermionic work functions φ_{th} were determined from the photocurrent saturation potential: 4.10, 4.06, 3.94, 3.90, and 4.15 ev (± 0.05 ev). The work function

Card 2/4

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B102/B106

Photoemission from gallium arsenide

decreases with increasing carrier concentration. The photoelectric work function φ_{ph} was found to rise linearly with rising hν for $4.66 \leq h\nu \leq 5.53$, and tends to decrease with increasing carrier concentration. $\delta = \varphi_{ph} - \varphi_{th}$ grows linearly with hν. $\delta = 0.49 - 0.43$ for $h\nu = 5.53$ and $\delta = 0.02 - 0.09$ for 4.66 ev. The maximum of the energy distribution of the photoelectrons was at low energies and was shifted toward higher energies with increasing hν and/or increasing carrier concentration. It is concluded from δ that in n-type GaAs the photoelectrons are excited from acceptor levels of impurity ions. At high hν they can also be excited from the valence band.

Academician A. A. Lebedev and L. L. Korenblit are thanked for discussions, T. S. Lagunova for assistance. There are 7 figures, 1 table, and 11 references: 8 Soviet and 3 non-Soviet. The four most recent references to English-language publications read as follows: H. R. Philipp. Phys. Rev., 107, 687, 1957; D. M. Packer, C. Lock. J. Opt. Soc. Amer., 41, 10, 699, 1951; F. S. Johnson, K. Watanabe, R. Toutey. J. Opt. Soc. Amer., 41, 10, 702, 1951; K. Watanabe. J. Opt. Soc. Amer., 43, 1, 32, 1953.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

Card 3/4

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32076
S/181/61/003/012/010/028
B102/B108

9,4175 (1114, 1163)

AUTHORS: Wang Pao-k'un and Arsen'yeva-Geyl', A. N.

TITLE: Influence of illumination on photoemission from gallium arsenide

PERIODICAL: Fizika tverdogo tela, v. 3, no. 12, 1961, 3628 - 3633

TEXT: The authors studied the effect of illumination on GaAs photoemission. Method and specimens are described in a previous article (present periodical, pp. 3621 - 3627). The intensity of incident light was measured with a thermocouple designed by B. P. Kozyrev. Illumination had no effect on the spectral distribution of the quantum yield, but caused shift of the volt-ampere characteristics. Amount and direction of this shift did not depend on the energy hν of the incident photons. The thermionic work function of the emitter was determined from the contact potential difference Δ between emitter and collector. Illumination reduced the thermionic work function of n-type GaAs specimens and raised that of p-type specimens. Δ was found to depend on intensity (I) of the incident light as $\Delta = A\sqrt{I}$, where A is a constant. A as a function of the wave-

Card 1/ 2

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Influence of illumination..

length λ has its maximum at $h\nu \approx 1.35$ ev ($\lambda \approx 920$ mμ) which corresponds to the intrinsic absorption edge of GaAs. It was established that the observed influence of illumination on GaAs photoemission is due to a change of the surface potential barrier, or to a bend of the zones owing to the surface states. Academician A. A. Lebedev is thanked for his interest and discussions, L. P. Strakhov, O. M. Artamonov, and T. T. Bykova for assistance. There are 5 figures, 1 table, and 6 references: 4 Soviet and 2 non-Soviet. The four references to English-language publications read as follows: S. Rosenfeld a. W. H. Hoskins. Rev. Sci. Inst., 16, 343, 1954; W. Brattain a. J. Bardeen. Bell. syst. techn. J., 32, 1, 1953; A. Kabayashi a. S. Kawaji. J. Phys. Soc. Japan, 11, 369, 1956; 10, 270, 1955; S. R. Marrion. J. Phys. Chem., 57, 860, 1953.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

SUBMITTED: July 1, 1961

Card 2/2

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

S/181/62/004/010/010/063
B108/B186

AUTHORS: Arsen'yeva-Geyl', A. N., and Dzhelepova, N. B.

TITLE: Preparation of PbS to high strain sensitivity

PERIODICAL: Fizika tverdogo tela, v. 4, no. 10, 1962, 2714-2718

TEXT: To study the effect of p-n junctions at the grain boundaries of PbS on the strain sensitivity, the authors subjected p-type samples pressed from PbS powder to thermal treatment at 550°C for periods ranging from 0.5 to 30 minutes. The resistance R as measured with a Wheatstone bridge and, in the case of high-resistivity samples, with an M-91/A (M-91/A) galvanometer (sensitivity $1.5 \cdot 10^{-8}$ a) was found to be a linear function of the deformation. The strain sensitivity was calculated from the formula $K = (\Delta R/R)/\epsilon$, where ΔR is the change in resistance caused by the relative deformation ϵ. Thermal treatment led to the formation of oxide layers at the grain boundaries and, consequently, to the formation of p-n junctions. (J. C. Slater, Phys. Rev., 103, 1631, 1956). As heat treatment proceeds, these oxide layers become thicker (increase in R) and then break, reducing the grain size (decrease in R). As R after its decrease then

Card 1/3

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again increases, this fact must be attributed to structural changes in the PbS. Bending tests and tests with omnilateral pressure (oil bath) gave similar results. Oxidation (heating) increases the barriers at the PbS grains, water vapor lowers them (according to T. T. Rykova) reducing the strain sensitivity. This is due to oxygen and water vapor causing a bending of the bands in opposed directions. There are 3 figures and 1 table.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: May 4, 1962

Fig. 2. Dependence of the resistance R, in ohms, (curve I) of PbS samples and of their strain sensitivity K (curve II) on the heating time t, in minutes, of the powder.

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AFSEN'YEVA-GEYL', A.N.; DZHELEPOVA, N.B.

High tensiometric properties of PbS. Fiz.tver.tela 4 no.10: 2714-2718 O '62. (MIRA 15:12)

1. Leningradskiy gosudarstvennyy universitet.
(Tensiometers) (Lead sulfide)

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L 52788-65 EWT(1)/EPA(w)-2/EWG(t)/T/EWA(m)-2/EWA(b) Pu-5/Pab/EWA(c) LIP(c)
AT
ACCESSION NR: AP50 0732 UR/0181/65/007/004/1187/1192

AUTHOR: Arsen'yeva-Gel', A. N.; Bok, A. An.

TITLE: Photoelectronic emission from p-type GaAs

SOURCE: Fizika tverdogo tela, v. 7, no. 4, 1965, 1187-1192

TOPIC TAGS: gallium arsenide, photoelectronic emission, intrinsic absorption, carrier density

ABSTRACT: A study was made of the photoelectronic emission from crystalline samples of p-GaAs of its response to illumination by photons from the spectral region corresponding to the edge of the intrinsic absorption. A similar investigation of n-type GaAs was made by one of the authors earlier (Arsen'yeva-Gel', with Wang Fu-k'un, FTT, 3, 628, 1961). Unlike in the earlier experiment, the shift of the voltage-current characteristic of p-GaAs was small so that an incandescent lamp was used as a light source, with a water filter to prevent heating of the sample. The added illumination was shown to cause a shift in the voltage-current characteristic towards larger negative potential on the collector and to a decrease in the

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ACCESSION NR: AP5010732

saturation photocurrent. The largest shift was observed in samples with carrier density 10^{16}--10^{17} cm^{-3}. The effect was fully reversible. The results can be attributed to the influence of the bending of the bands on the surface of the semiconductor on the photoemission. "We are grateful to Academician A. F. Ioffe for continuous interest in the work and to Corresponding Member P. G. Borzyak for reviewing the manuscript and valuable hints." Orig. art. has 3 figures.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: 19Nov64 ENCL: 00 SUB CODE: EM

NR REF SOV: 001 OTHER: 002

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

A.GEN'YEVA-GEYL', A.N.; YENIKHE, G.; LEBEDEVA, Ye.N.

Photoemission from F-centers in NaCl and KCl crystals. Izv. AN SSSR. Ser.fiz. 29 no.3:463-465 Mr '65. (MIRA 18:4)

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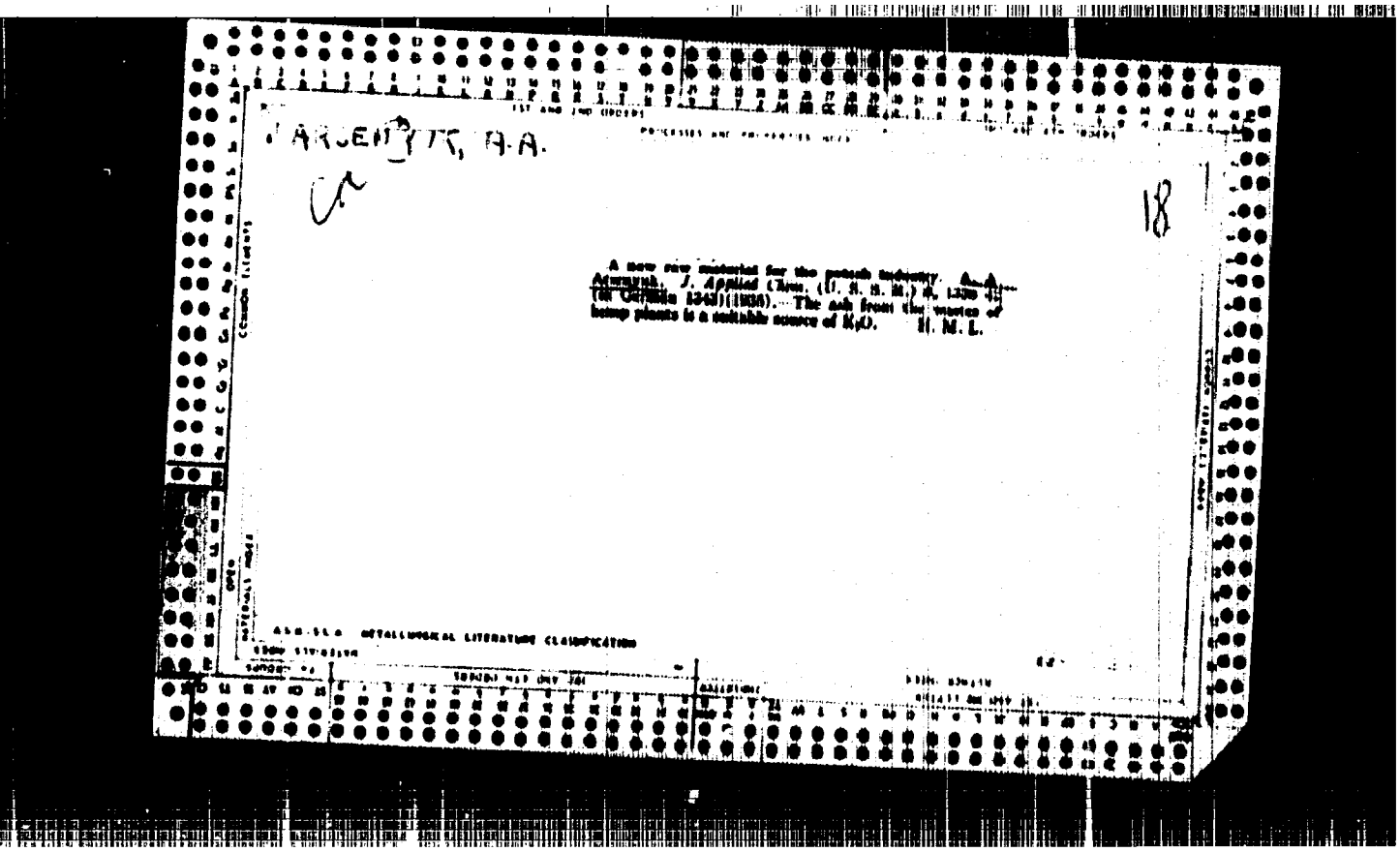

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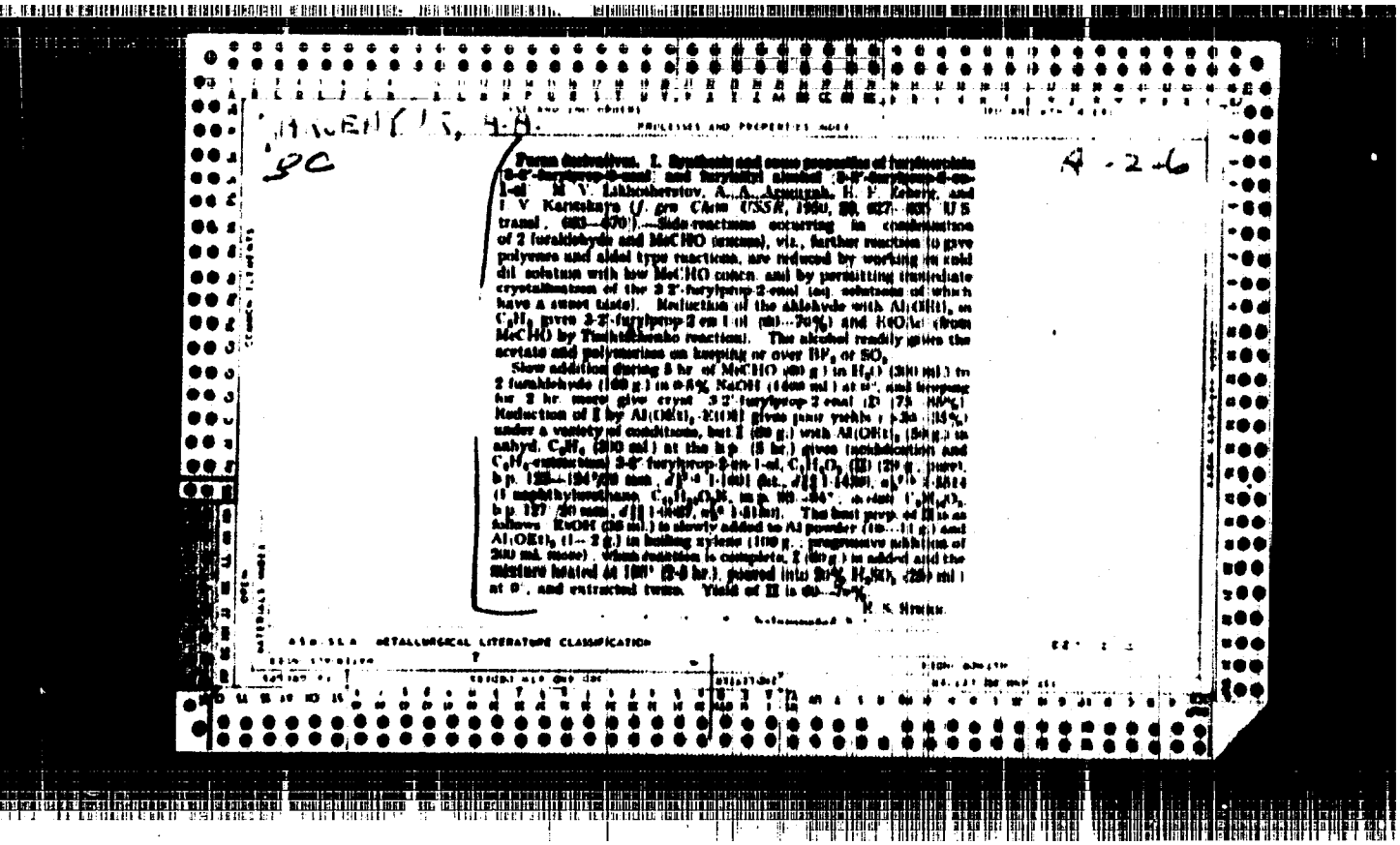

Furan derivatives. I. Synthesis and some properties of furylmercaptals of 2-furylpropan-2-one and furylaryl alcohol 2,2'-furylpropan-2-ol-1-ol. M. V. Likhosherstov, A. A. Arutyunyan, N. P. Kharin, and I. V. Karpukhina (J. gen. Chem. USSR, 1950, 20, 627–630; U.S. transl., 683–670).—Side-reactions occurring in condensations of 2 furaldehyde and MeCHO (furacrom), viz., further reaction to give polymers and aldol type reactions, are reduced by working in cold dil. solution with low MeCHO concn. and by permitting immediate crystallisation of the 2,2'-furylpropan-2-ol (eq. substance of which have a sweet taste). Reduction of the aldehyde with $Al(OEt)_3$ in C_6H_6 gives 2,2'-furylpropan-2-ol-1-ol (III) (70%) and EtOAc (from MeCHO by Tishchenko reaction). The alcohol readily gives the acetate and polymerises on keeping or over BF_3 or SO_2.

Slow addition during 5 hr. of MeCHO (80 g.) in H_2O (300 ml.) to 2 furaldehyde (100 g.) in 0·5% NaOH (1000 ml.) at 0°, and keeping for 2 hr. more give cryst. 2,2'-furylpropan-2-ol (I) (75% HPC). Reduction of I by $Al(OEt)_3$–EtOH gives poor yields (<30%) under a variety of conditions, but I (80 g.) with $Al(OEt)_3$ (50 g.) in anhyd. C_6H_6 (300 ml.) at the b.p. (8 hr.) gives isobutylation and C_6H_6-extraction 2,2'-furylpropan-2-ol-1-ol, $C_{11}H_{12}O_3$ (II) (70 g., purif. b.p. 125–134°/20 mm., d^{15} 1·1001 (lit., d^{15} 1·1430), n_D^{15} 1·5014 (1-naphthylurethane, $C_{18}H_{17}O_4N$, m.p. 109–110°, α-naph. $(C_{10}H_7)_2$, b.p. 127°/20 mm., d^{15} 1·1007, n_D^{15} 1·5130). The best prep. of II is as follows: EtOH (30 ml.) is slowly added to Al powder (10–11 g.) and $Al(OEt)_3$ (1–2 g.) in boiling xylene (100 g., progressive addition of 200 ml. mass). When reaction is complete, I (80 g.) is added and the mixture heated at 100° (2–3 hr.), poured into 5% H_2SO_4 (250 ml.) at 0°, and extracted twice. Yield of II is 60–70%.

R. S. Stokes.

A50-51A METALLURGICAL LITERATURE CLASSIFICATION

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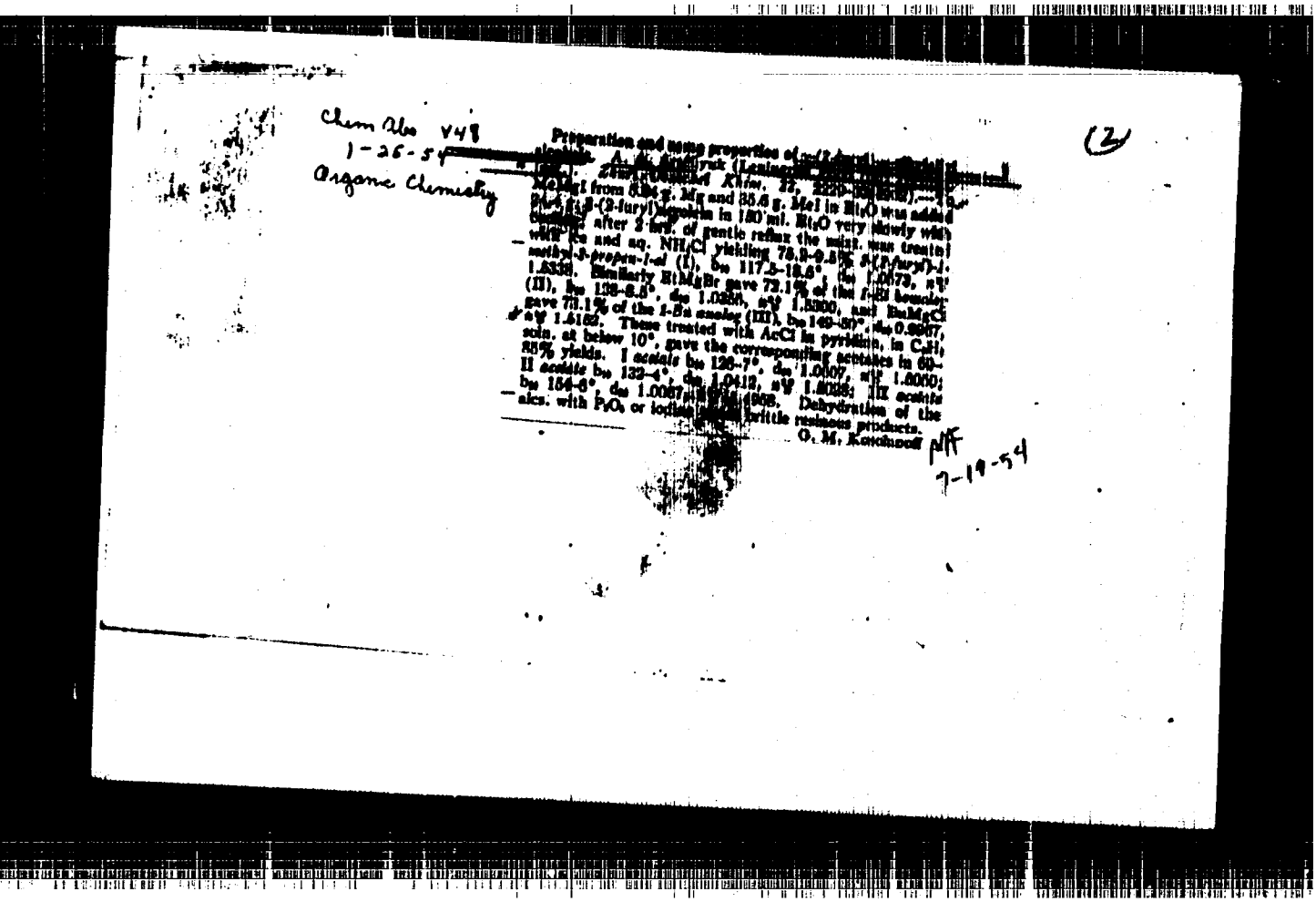

Chem Abs v49
1-25-55
Organic Chemistry

(2)

Preparation and some properties of [illegible]

A. [illegible] Zhur Obshchei Khim., 22, [illegible]

[illegible] from 6.84 g. Mg and 30.6 g. MeI in Et$_2$O was added [illegible] 3-(2-furyl)propanone in 150 ml. Et$_2$O very slowly with [illegible] after 2 hrs. of gentle reflux the mixt. was treated with ice and aq. NH$_4$Cl yielding 76.2-9.5% 3-(2-furyl)-1-methyl-2-propen-1-ol (I), bp 117.5-18.5°, [illegible] 1.4838. Similarly EtMgBr gave 73.1% I, bp 1.0079, n^{20}D (II), bp 128-8.5°, dp 1.0220, n^{20}D 1.4900, and BuMgCl gave 71.1% of the 3-Bu analog (III), bp 149-50°, dp 0.9907, n^{20}D 1.4762. These treated with AcCl in pyridine, in C$_6$H$_6$, soln. at below 10°, gave the corresponding acetates in 60-85% yields. I *acetate* bp 128-7°, dp 1.0107, n^{20}D 1.4600; II *acetate* bp 132-4°, dp 1.0412, n^{20}D 1.4626; III *acetate* bp 154-6°, dp 1.0087, [illegible] 1.4608. Dehydration of the [illegible] alcs. with P$_2$O$_5$ or iodine [illegible] brittle resinous products.

O. M. Kanchuger

NFF
7-19-54

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSENYUK, A.A.

Preparation and certain properties of 1-(2-furyl)-3-methyl-buten--1-ol-3. Zhur.ob.khim. 26 no.3:766-770 Mr '56. (MLRA 9:8)

1. Leningradskiy tekhnologicheskiy institut pishchevoy promyshlennosti.

(Butenol)

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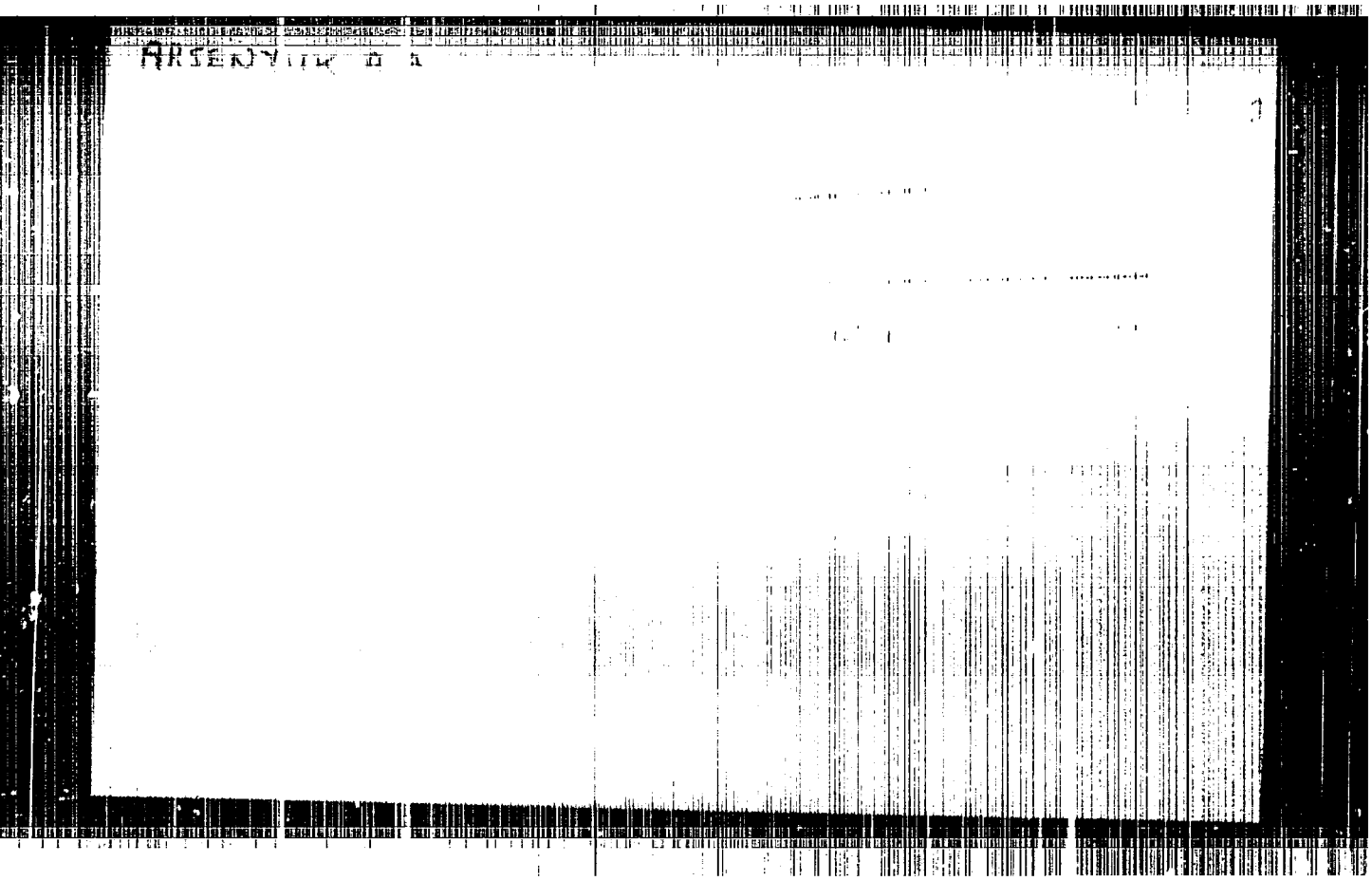

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSENYUK, A.A.

Condensation of 1-(α-furyl)-3-methyl-1,3-butadiene with maleic anhydride. Zhur.ob.khim. 31 no.9:2924-2926 S '61. (MIRA 14:9)

1. Voronezhskiy tekhnologicheskiy institut.
(Butadiene) (Maleic anhydride)

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KANARCHUK, V.Ye. [Kanarchuk, V.IE.]; ARSENYUK, Yu.V. [Arseniuk, IU.V.]

Improving the efficiency of motortruck transportation. Mekh. sil'. hosp. 14 no.10:19-20 O '63. (MIRA 17:2)

1. Starshiy inzh. po avtotransportu Kiyevo-Svyatoshinskogo rayonnogo ob"yedineniya "Sil'gosptekhnika" (for Kanarchuk). 2. Starshiy inzh. Ukrainskogo filiala Gosudarstvennogo vsesoyuznogo nauchno-issledovatel'skogo tekhnologicheskogo instituta remonta i ekspluatatsii mashinno-traktornogo parka (for Arsenyuk).

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BRITKIN, Grigoriy Alekseyevich; PAZYUK, Yevgeniy Ivanovich; ARSENOV, M.A., kand.tekhn.nauk dots., red.; AZAROV, A.S., kand.tekhn.nauk, red.; BORODULINA, I.A., red.izd-va; POL'SKAYA, R.O., tekhn.red.

[Machining parts on large lathes] Obrabotka detalei na krupnykh tokarnykh stankakh. Pod obshchei red. M.A.Arsenova. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1958. 106 p. (Biblioteckha tokarya-novatora, no.7) (MIRA 11:5)
(Turning)

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[redacted], A. ..

The flameless s burning of blast-furnace gas Sverdlovsk, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1947. 102 p. (50-57389)

TN718.A7

1. Blast-furnaces. 2. Gases.

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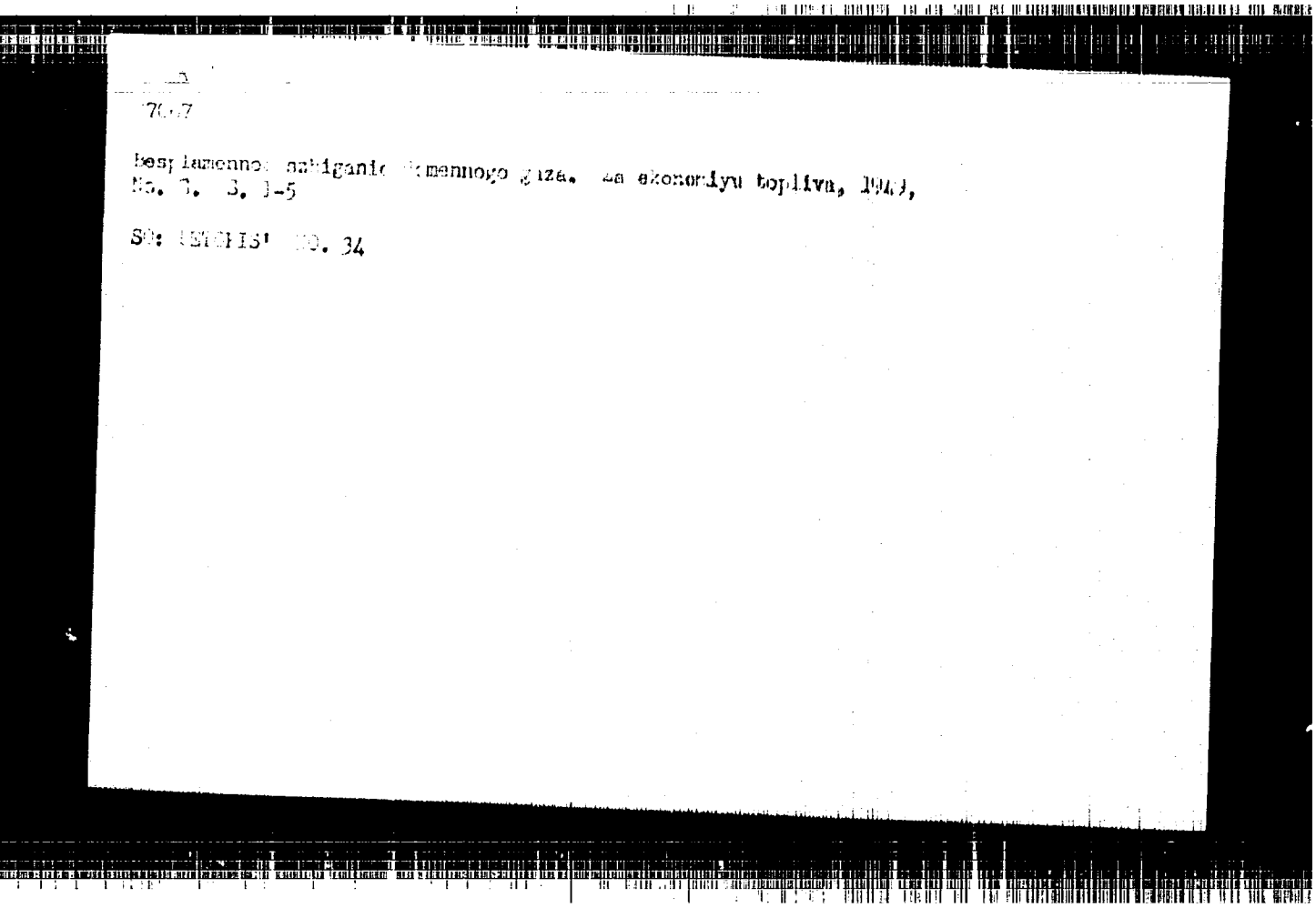

70-7

Besplamennoe sotrudnichestvo mezhdu gazet. Za ekonomiyu topliva, 1949, No. 7, s. 1-5

SO: USSR IS No. 34

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSEYEV, A.V.; KITAYEV, B.I., professor, retsenzent; LEVCHENKO, P.V., kandidat tekhnicheskikh nauk, retsenzent; KOVADENOV, A.V., redaktor; KOVALENKO, N.I., tekhnicheskiy redaktor

[Combustion of industrial gases; methods and apparatus] Sshiganie promyshlennykh gazov; metody i pribory. Sverdlovsk, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1952. 390 p. [Microfilm] (MLRA 7:10)

1. Vostochnyy institut toplovoispol'zovaniya (for Arseyev)
(Gas as fuel)

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A052/A001

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 14, p. 22, # 28673

AUTHOR: 1 Arseyev, A. V.

TITLE: The Results of Investigations Carried Out by VNIIMT on the Gas Combustion

PERIODICAL: V sb.: Teoriya i praktika szhiganiya gaza. Oborongiz, 1958, pp. 150-167

TEXT: High-efficiency chamberless burners suitable for combustion of low-pressure gas have been designed. Materials for tunnels do not affect the completeness of combustion; they can be selected solely by their thermal resistance. Reliable individual mixers for gas pressure of 100-300 mm water column have been designed to replace the unsuitable central mixers. Flameless burners without premixing have been designed for high-power steam boilers. Gases, produced at non-ferrous metal melting, with the temperature of combustion of 350-600 kcal/nm^3, and subsurface gas can be burned under condition of an

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ARSEYEV, A. V. (Cand. Tech. Sci.)

"Results of Research in the Field of Gas Combustion by VNIIMT (All-Union Scientific Research Institute for Metallurgical Heat Engineering)"

(Theory and Practice of Gas Combustion; Transactions of a Scientific and Technical Meeting) Leningrad, Oostoptekhizdat, 1958. 343 p.

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

SOV/96-59-6-13/22

AUTHOR: Arseyev, A.V. (Candidate of Technical Sciences)

TITLE: The Heat Transfer and Resistance of Tubes during High Temperature Heating of Air (Teplootdacha i soprotivleniye v trubakh pri vysokotemperaturnom nagreve vozdukha)

PERIODICAL: Teploenergetika, 1959, Nr 6, pp 67-72 (USSR)

ABSTRACT: In designing high-temperature tubular air heaters, the tube temperatures are near-critical in respect of heat resistance and mechanical strength. Great accuracy is therefore required in the heat-transfer calculations, but available data on heat transfer and resistance to flow under such conditions are not reliable. It was accordingly decided to make an experimental study of heat transfer and resistance when heating air under the conditions met in high-temperature recuperators. The tests were made in tubes of 1 mm wall thickness made of heat-resistant steel and heated by electric current. Clean dry compressed air was passed through the tubes. Details are given of the experimental rig and of the measurements that were made. Various corrections that were necessary are explained. Local heat-transfer coefficients were calculated by formula (1) and local

Card 1/5

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The Heat Transfer and Resistance of Tubes during High Temperature Heating of Air

friction coefficients by formula (2). It is considered that the maximum relative error in determining heat transfer was ± (3 to 8) % and in determining the coefficient of friction ± (4 to 15) %, depending on the experimental conditions. Two sizes of tube were used, 14 and 22 mm internal diameter. When long tubes were used the air was heated to between 800 and 850 °C and on reducing the length of the heated part of the tube the air temperature fell to 700 and 600 °C. The rate of flow of air by weight ranged from 14 to 144 kg/m^2 sec and the linear velocity from 3 to 190 m/sec. The hydraulic resistance under isothermal conditions was studied in the Reynolds number range of 17000 to 175000 and under heat exchange conditions from 7000 to 105000. Heat transfer was studied in the Reynolds number range of 7000 to 108000. The heat transfer and resistance relationships were found to be the same for both sizes of tube and for different air pressures. Under isothermal conditions the tubes behaved as though smooth for Reynolds numbers below 30000; the coefficient of friction then followed the

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The Heat Transfer and Resistance of Tubes during High Temperature Heating of Air

well-known relationship for smooth tubes given in expression (3). (See also Fig 1). For values of Reynolds number greater than 30000 the coefficient of friction followed the law for rough tubes. However, in both regions the coefficient of friction for Reynolds numbers between 17000 and 175000 may be calculated approximately by formula (4). Under heat-transfer conditions the coefficient of friction behaved just as under isothermal conditions, provided the Reynolds number is related to the flow temperature (Fig 2a). If it is related to the wall temperature, the experimental points lie considerably lower (see Figs 2b and c). Under heat-exchange conditions the coefficient of friction may be calculated as for isothermal conditions, using a value of Reynolds number related to the wall temperature, but in this case, as follows from Fig 3, a correction must be introduced for the temperature factor. Formulae (5) and (6) are relevant here: curves corresponding to these two formulae, together with experimental data, are plotted in Fig 4. As will be seen from the curves given in Fig 5,

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The Heat Transfer and Resistance of Tubes during High Temperature Heating of Air

no single-valued simple relationship was found between the criteria of thermal and hydraulic similarity. It appears that heat transfer also depends on the temperature conditions, which may be allowed for by a temperature factor (see Fig 6). The influence of the temperature factor is particularly marked when determining the Nusselt criterion from the wall temperature and the Re or Pe numbers from the flow temperature (Fig 6c). The heat exchange relationship corresponds well with formulae (7) and (8) for the relationship between the criteria of thermal and hydraulic similarity with allowance for the temperature factor. When the criteria are related to the flow temperature, formula (9) applies and when they are related to the wall temperature, formula (10). Values of the criteria of thermal similarity calculated from mean experimental data are in good agreement with the calculated curves of local heat-transfer, as will be seen from Fig 8. Thus the formulae are suitable for heat-transfer calculations on individual sections of the tubes and on tubes as a whole. Formulae (11) and (11a) are then given

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The Heat Transfer and Resistance of Tubes during High Temperature Heating of Air

for the heat-transfer coefficient. The results are briefly compared with previously published data and are stated to be intermediate between them. Formula (13) for the relationship between the criteria of thermal similarity is in comparatively good agreement with experimental data only over the Reynolds number range of 20000 to 60000.
There are 8 figures and 3 Soviet references.

ASSOCIATION: VNIIMT

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S/124/61/000/011/032/046
D237/D305

11.7000
AUTHORS: Arseyev, A.V., and Sharova, T.V.

TITLE: Experimental characteristic of gaseous jets

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 11, 1961, 101, abstract 11B677 (Sb. 3-ye Vses. soveshchaniye p. teorii goreniya, v. 2, M., 1960, 250 - 261)

TEXT: The results are presented of experimental investigation of a turbulent diffusive flame jet, obtained in combustion of generator gas in a cylindrical chamber with a burner consisting of two coaxial pipes, one within the other. The following were varied: Absolute velocities of gas and air emerging from the burner (during combustion of cold components by 3.4 times, and heated above the ignition point t = 700°C, by 2.3 times), ratio of velocities of the gas and air (over the range from 3.96 to 0.23), diameter of cylindrical chamber (55 and 170 mm), initial temperature of the components. Concentration of basic gases in the jet, temperature, velocities and dynamic pressure of gases were measured over twelve longitudinal sections. Calculations based on the experimental data

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Experimental characteristic of ...

obtained from each section were performed of gas density linear and inertial velocities, the total amount of unburned gas, partially combustible intermediates and total combustion. Experimental data obtained served as a basis of several deductions of a physical character by the author which referred to boundaries, inner combustion and heat conductivity of a flame jet, under the given experimental conditions. [Abstractor's note: Complete translation].

B

Card 2/2

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

IVANOV, Nikolay Ivanovich; KULAKOV, Aleksey Maksimovich; TELEGIN, A.S., retsenzent; ARSHYEV, A.V., red.; KRYZHOVA, M.L., red.izd-va; MATLYUK, R.M., tekhn. red.

[Efficient fuel combustion in metallurgical furnaces; from practices of the Magnitogorsk Metallurgical Combine] Ratsional'noe szhiganie topliva v metallurgicheskikh pechakh; iz opyta Magnitogorskogo metallurgicheskogo kombinata. Sverdlovsk, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 139 p. (MIRA 14:11)
(Magnitogorsk--Metallurgical furnaces--Combustion)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSEYEV, A.V.; GOLOVANOV, Yu.M.; SHERMEYSTER, M.Sh.

Burner for annealing tires. Sbor. rats. predl. vnedr. v proizv. no.2:36 '61. (MIRA 14:7)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.
(Gas burners)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSEYEV, Aleksandr Vasil'yevich; LANOVSKAYA, M.R., red.izd-va; DOBUZHINSKAYA, L.V., tekhn. red.

[Burning of natural gas] Szhiganie prirodnogo gaza. Moskva, Metallurgizdat, 1963. 407 p. (MIRA 17:2)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

NEVSKIY, A. S.; ARSEYEV, A. V.; CHUKANOVA, L. A.; MALYSHEVA, A. I.; SHARKVA, T. V.

"Convective heat transfer in cylindrical chambers with recirculation."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

All-Union Sci Res Inst Metallurgy.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

LEVINETS, N.P.; SAMARIN, A.M.; SEMIKIN, I.D.; KAZAKOV, V.E.; BOMBIBEK, Ya.I.; PANYUKHNO, L.G.; SVINOLOBOV, M.P.; AVERIN, S.N.; SMIRNOV, V.M.; ZELENSKIY, V.D.; LAYKO, B.G.; TISHCHENKO, O.I.; OKHRIMOVICH, B.P.; DANILOV, A.M.; TISHKOV, Yu.Ya.; PANOV, M.A.; MARKELOV, A.I.; PETROV, A.K.; VASILEVSKIY, P.A.; PASYUK, K.I.; NESTEROV, V.I.; KHRUSTAL'KOV, L.A.; GLAZKOV, V.S.; MAKAGON, V.G.; FOMIN, G.G.; TRISHCHENKO, V.D.; KORZH, V.P.; SUYAROV, D.I.; ARSENYEV, A.V.; PAVLYUCHENKO, A.A.; ZHADAYEV, V.G.; KONDORSKIY, R.I.; MOROZOVA, I.A.; KOCHETOV, V.V.; PRUZHINER, V.L.; MALEVICH, I.A.; MALIOTANOV, D.I.; ZAKOVRYASHIN, I.I.; NOVSKIY, I.S.; NOVIKOVA, V.P.; GRISHIN, K.N.; MOSKOVSKAYA, M.L.; KORNEYEV, B.M.

Inventions. Met. i gornorud. prom. no.3:75-76 My-Je '64.
(MIRA 17:10)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ACC NR: AT6001367 SOURCE CODE: UR/0000/65/000/000/0230/0238

AUTHOR: Nevskiy, A. S.; Arseyev, A. V.; Chukanova, L. A.; Malysheva, I. I.; Sharova, T. V.

ORG: All-union Scientific Research Institute of Metallurgical Heat Engineering, Sverdlovsk (Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki)

TITLE: Convective heat transfer in cylindrical chambers with flow recirculation

SOURCE: Teplo- i massoperenos. t. 1: Konvektivnyy teploobmen v odnorodnoy srede (Heat and mass transfer. v. 1: Convective heat exchange in an homogeneous medium). Minsk, Nauka i tekhnika, 1965, 230-238

TOPIC TAGS: heat transfer, cooling, combustion chamber

ABSTRACT: Experiments were made to determine the heat transfer conditions when a hot gas is injected through a nozzle at the closed end of a cylindrical chamber. Under these conditions, a pressure gradient along the wall is established which induces flow recirculation. The latter considerably increases the heat transfer from the gas to the wall as compared with conventional turbulent heat transfer without recirculation. The experiments were conducted with two chambers which were 1.88 m and 2.43 m long and 0.3 and 0.18 m in diameter. The cylinder jackets were divided into 13 and 16 separate compartments, respectively, to permit calorimetric

Card 1/2

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ACC NR: AT6001367

measurement of the heat transfer at various points in the chamber. Air preheated to 973K was injected through one central and one peripheral nozzle. The nozzle diameters and the flow rates were varied as parameters. Nu_{ex} (experimental Nusselt number) were determined from the measured flow rates and temperatures in each calorimetric section. Nu was then calculated from the formula $Nu = 0.021\,Re^{0.8}$, and the ratio $\phi = Nu_{ex}/Nu$ was calculated and plotted for various air flow rates and nozzle sizes as a function of the distance from the inlet. It was found that ϕ increases and at a distance $\ell = (1.5—2.9)D$ (D is the chamber diameter), it reaches a maximum which for a given flow rate may attain a value of 7. When the air flow rate through the central nozzle was increased, the maximum of ϕ shifted toward the chamber outlet. The maximum had the lowest value when the air flow rates through the central and peripheral nozzles were equal. When air was injected through 55 uniformly spaced orifices in the chamber bottom, ϕ had no maximum and decreased rapidly to the normal value for turbulent heat transfer. Orig. art. has: 5 figures. [PV]

SUB CODE: 21/ SUBM DATE: 31Aug65/ ATD PRESS: 4176

HW

Card 2/2

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

SOV/125-59-8-11/18

8(5)

AUTHORS: Khromoy, Yu.D., and Arsh, A.M. (Ryazan')

TITLE: All-Metal Ignitrons for Contact Welding

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 8, pp 79-84 (USSR)

ABSTRACT: The article describes a series of new all-metal ignitrons intended for electric contact welding applications, and discusses several aspects of their use in operation. In these all-metal units the cooling sleeve is an integral part of the whole; the jacket is made of non-rusting steel, type 1Kh18N9T. The authors enumerate a number of advantages of these new all-metal types over the glass-metal types. In this article 3 types of all-metal ignitron are dealt with: the I1-350/0,8, the I1-140/0,8, and the I1-70/0,8 (Fig 1). The authors discuss the choice and computation of operating conditions for a pair of "reverse-parallel" connected ignitrons (i.e. the voltage between anode and cathode of one ignitron is the back voltage for the second), taking into consideration the averaging time, "switch-on duration", and current power characteristics (Fig 2) of the ignitrons. It is

Card 1/3

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stated that operating conditions with or without phase regulation should remain the same. Permissible welding conditions for a pair of "reverse-parallel" connected II-70/0,8 units are computed in the text. Selection of ignitrons for "reverse-parallel" connected circuits is discussed in connection with the keep-alive current and ignition angle of the ignitrons, and with reference to measurements and data from the Avtozavod imeni Likhacheva (Auto Works imeni Likhachev). Ignitrons for balanced operation in welding machines should be selected with close values of keep-alive current rating. Requirements of the power supply for the keep-alive circuit are also discussed. To guarantee ignition it is recommended that a keep-alive voltage of no less than 200 V at a current up to 30 A is necessary. The authors make note of cases of unstable operation of ignitrons in service, due not only to the ignitrons themselves, but as well to defects in interrupter circuits; explanations of these malfunctions and means of avoiding them are also briefly noted. It is stated that in the series of all-metal ignitrons shortcomings inherent in glass metal

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All-Metal Ignitrons for Contact Welding SOV/125-59-8-11/18

construction have been eliminated. Research to improve ignitron quality is recommended as follows: study of the relation between keep-alive parameters, and load current and "switch-on duration"; study of the relation between ignitron ignition angle, and the keep-alive parameters and cos . ; study of the relation between the keep-alive parameters and the build-up time of the voltage on the igniter. There are 2 graphs and 1 photograph.

SUBMITTED: April 9, 1959

Card 3/3

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSH, A.M. (Ryazan')

Appearance of a direct current component in resistance machines and its elimination. Avtom. svar. 16 no.11:89-93 N '63. (MIRA 17:1)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

PHASE I BOOK EXPLOITATION SOV/4634

Epshteyn, Yevgeniy Fedorovich, Emanuel' Izrailevich Arsh, and Genrikh Konstantinovich Vitort

Novyye metody razrusheniya gornykh porod (New Methods of Disintegrating Rocks) Moscow, Gostoptekhizdat, 1960. 85 p. 2,100 copies printed.

Executive Ed.: S.M. Kayeshkova; Tech. Ed.: L.V. Ganina.

PURPOSE: This book is intended for engineers and technicians working in the petroleum, coal, mineral, and construction industries.

COVERAGE: The author describe new methods of disintegrating rocks in drilling boreholes, methods of secondary crushing, and the development of coal and ore deposits. Rotary-percussion drilling with immersed hydraulic drills, and the disintegration of rock by means of electrohydraulic units and high frequency currents are described. The results of industrial and laboratory tests of various working units are given. No personalities are mentioned. There are 84 references: 81 Soviet, 1 German, 1 English, and 1 Polish.

TABLE OF CONTENTS:

Card 1/3

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ACC NR: AT7000563 SOURCE CODE: UR/0000/65/000/003/0126/0131

AUTHOR: Arsh, E. I.; Kirillov, V. A.

ORG: Dnepropetrovsk Mining Institute (Dnepropetrovskiy gorn y institut)

TITLE: Investigation of electric and magnetic properties of sands containing ores for devising means of automation

SOURCE: Dnepropetrovsk. Gornyy institut. Gornaya elektromekhanika i avtomatika, no. 3, 1965, 126-131

TOPIC TAGS: magnetic property, polycrystal mineral, magnetic susceptibility, electromagnetic screen, ferromagnetic substance, concentrometer, ore, automation, electric property, mineral, electromeasuring device

ABSTRACT: The magnetic properties of polycrystal minerals were investigated using a special instrument similar to that used for measuring magnetic susceptibility. This instrument is described in detail. It consists of a magnetic bridge including an H-shaped core containing two coils, one of which is the generator and the other is the indicator. This instrument is located in an electromagnetic screen in order to protect it from interference when weak magnetic samples are measured. Results of measurements of magnetic susceptibility of magnetically weak sands are represented graphically. These results show that sands can be classified by their magnetic properties. The magnetic property of minerals depends not only

Card 1/2

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ACC NR: AT7000563

on the presence of magnetite and titanomagnetite grains, but also on the influence of other minerals which are formed during the transition into other forms. A formula is given for computing the magnetic susceptibility from the contents of ferromagnetic substances. Results of these investigations showed that dielcometry and kappametry may be used for making concentrometers. Orig. art. has: 2 tables, 4 figures, and 3 formulas.

SUB CODE: 08/ SUBM DATE: 04Oct65/ ORIG REF: 007

Card 2/2

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSH, E. I., Cand. Tech. Sci. (diss) "Investigation of Decomposition of Martite-Hematite Quartzites and Ores of Krivbas by High-Voltage Currents," Dnepropetrovsk, 1961, 12 pp (Dnepropetrovsk Mining Institut.) 200 copies (KL Supp 12-61, 262).

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

BURA, G.G., [Bura, H.H.]; VITORT, G.K. [Vitort, H.K.]; ARSH, E.I.

Change in the composition of ferruginous cherts during their disintegration by high-frequency currents. Geol.rud. 2: no.6:23-32 '62. (MIRA 16:2)

1. Dnepropetrovskiy gornyy institut.
(Ukraine—Chert—Analysis)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ACC NR: AP7001037 SOURCE CODE: UR/0410/66/000/003/0032/0036

AUTHOR: Arsh, E. I.; Krasin, L. A., (Dnepropetrovsk) 26

ORG: none B

TITLE: Method of automating the measurements of the frequency characteristics of the parameters of dielectrics

SOURCE: Avtometriya, no. 3, 1966, 32-36

TOPIC TAGS: dielectric material, frequency characteristic

ABSTRACT: It is shown that the automation of the determination of the frequency characteristics of permittivity and loss-angle tangent, which enhances the accuracy and reduces the labor requirement of the measurements, can be accomplished by means of a comparison of two identical self-excited frequency oscillators when the dielectric specimen is placed in the capacitor of the tank circuit of one of these oscillators. The relative error of this method does not exceed the error of the known resonance methods with circuits containing lumped elements. The use of computing units of the analog type makes it possible to directly determine the frequency characteristics of dielectrics and to eliminate the labor-consuming analysis of measurement findings. The pertinent formulas are derived. This method of automatic measurements can be used to investigate the parameters of new dielectrics and to carry out extensive studies of the electrical properties of various materials and rocks. Orig art. has: 18 formulas. [JPRS: 38,490]

Card 1/1 SUB CODE: 20, 09 / SUBM DATE: 06 Sep65 / ORIG REF: 001 / OTH REF: 001

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APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ACC NR: AP7002965 (A,N) SOURCE CODE: UR/0413/66/000/021/0044/0044

INVENTOR: Florinskiy, F.V.; Arsh, E.I.; Didyk, R.P.; Rogov, M.B.; Krasnovskiy, S.S.; Vinogradov, B.V.; Irglach, A.I.

ORG: none

TITLE: A method of producing clad tube billets by explosion. Class 21, No. 189494 [announced by the Dnepropetrovsk Mining Institute im. Artem (Dnepropetrovskiy gornyy institut); Ukrainian Scientific-Research Institute of Pipes (Ukrainskiy nauchno-issledovatel'skiy trubnyy institut)

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 24, 1966, 44

TOPIC TAGS: metal tube, ~~clad metal tube, clad tube manufacture, clad tube billet~~ METAL CLADDING, EXPLOSIVE FORMING

ABSTRACT: This Author Certificate introduces a method of explosive cladding of tube billets. The assembled hollow base and cladding billets are expanded by shooting a sizing mandrel through the bore. To increase the productivity

Card 1/2 UDC: 621.774.21:621.791.77:621.771.5.044

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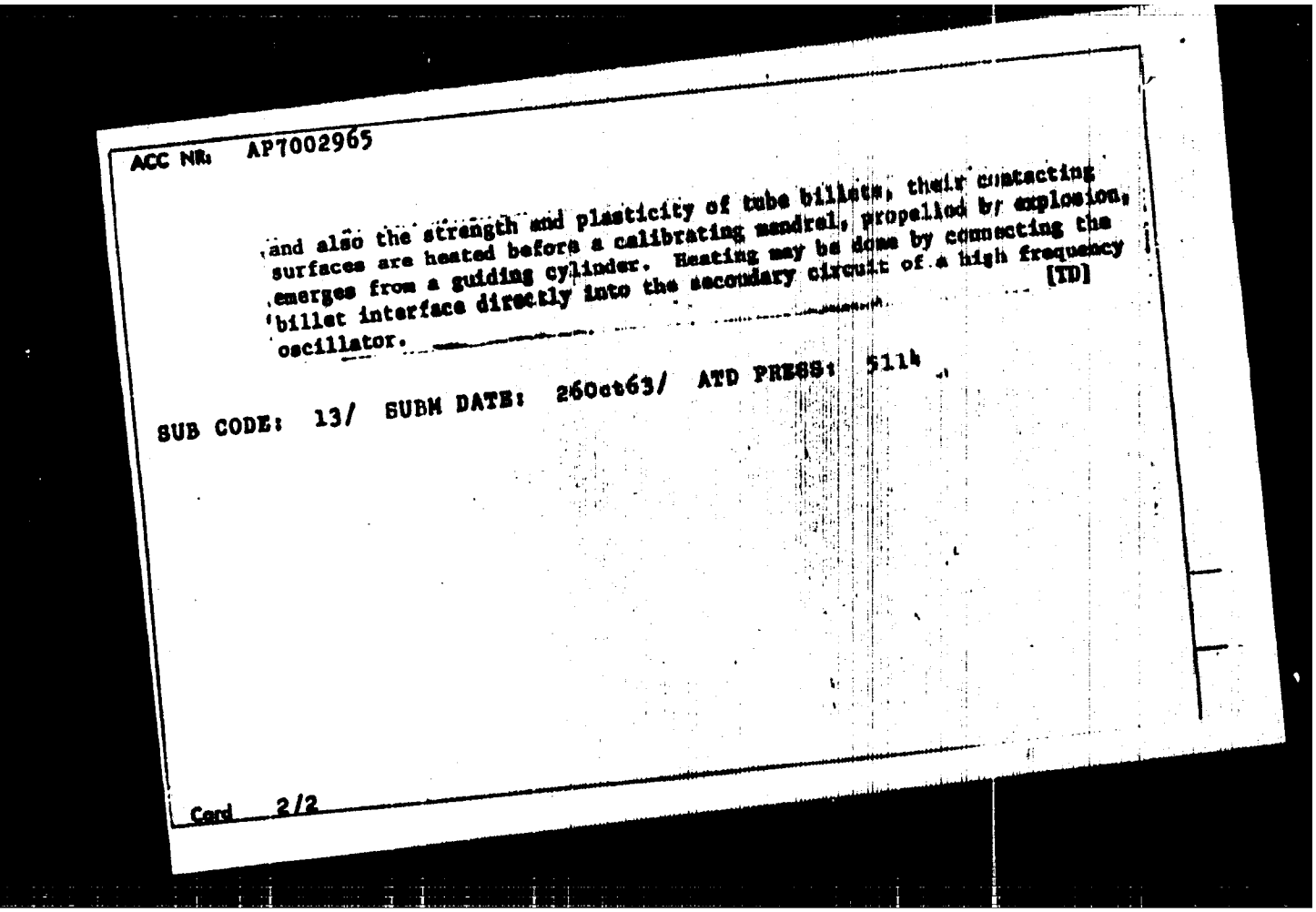

ACC NR: AP7002965

and also the strength and plasticity of tube billets, their contacting surfaces are heated before a calibrating mandrel, propelled by explosion, emerges from a guiding cylinder. Heating may be done by connecting the billet interface directly into the secondary circuit of a high frequency oscillator. [TD]

SUB CODE: 13/ SUBM DATE: 26Oct63/ ATD PRESS: 5114

Card 2/2

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSH, Ya.Ye.

Atmospheric salinization of ground waters in the areas north of Soviet deserts as revealed by the Turgay Depression. Vop. gidrogeol. i inzh.geol. no.19:33-40 '61. (MIRA 15:2)
(Turgay Gates—Water, Underground)
(Precipitation(Meteorology))
(Salt)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ACCESSION NR:: AP4012448 S/0078/64/009/002/0414/0421

AUTHORS: Speranskaya, Ye. I.; Arshakuni, A.A.

TITLE: Bismuth oxide--germanium dioxide system

SOURCE: Zhurnal neorg. khim., v. 9, no. 2, 1964, 414-421

TOPIC TAGS: bismuth oxide containing system, germanium dioxide containing system, phase diagram, stable phase diagram, metastable phase diagram, differential thermal analysis, x ray analysis, Bi sub 4 (GeO sub 4) sub 3, Bi sub 14 GeO sub 23, gamma form of Bi sub 2 O sub 3

ABSTRACT: The Bi_2O_3-GeO_2 system was investigated by differential thermal and x-ray analysis. Two phase diagrams--the stable and the metastable--were established for the first time for this type of system (fig. 1). The stable phase diagram shows that by reacting the alpha-quartz form (hexagonal) of GeO_2 with the beta-form (tetragonal) of Bi_2O_3, two compounds are formed with Bi_2O_3:GeO_2 ratios of 2:3 and 7:1. $Bi_4(GeO_4)_3$, melting at 1044 - 4C, is formed by an

Card 1/3

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ACCESSION NR: AP4012448

exothermic reaction at about 790C; $Bi_{14}GeO_{23}$, melting congruently at 923 - 3C, by exothermic reaction at 882C. A eutectic mixture of GeO_2 and $Bi_4(GeO_4)_3$ crystallizes at 960C: composition 25% Bi_2O_3-75% GeO_2. A eutectic mixture of $Bi_{14}GeO_{23}$ crystallizes at 880C: 67% of Bi_2O_3 and 33% GeO_2. A eutectic mixture of $Bi_{14}GeO_{23}$ and tetragonal form of Bi_2O_3 crystallizes at 830C. The metastable phase diagram shows that reaction of the hexagonal form of GeO_2 with cubic body-centered form of Bi_2O_3 forms one compound--phase A. By extracting the fusion curve of the monotropic form of Bi_2O_3 to its ordinate, the melting temperature of the monotropic gamma form of Bi_2O_3 was determined to be 836C. "A.A. Reshchikov carried out the analysis. (X-ray analysis) was carried out with P.A. Koz'min." Orig. art. has: 3 tables and 4 figures.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry Academy of Sciences SSSR)

Card 2/2 Sub: 4MAy62

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

NADGHARYAN, K.K., inzh.; ARSHAKUNI, D.Ye.

Experience in strengthening soils using the single-injection silication method. Nov.tekh. i perod. op v stroi. 19 no.7:11-14 Jl '57. (MIRA 10:10)
(Odessa--Soil stabilization)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSHAKUNI, R. G.; KOLCHIN, A. M.; PANCHENKOV, G. M.

Isotopic analysis of silicon with the aid of a mass spectrometer.
Zhur. fiz. khim. 37 no. 3:677-679 Mr '63. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

AFSH.KUNI, R.G., [illegible]

Mass spectrometric isotope analysis of germanium. Zhur. fiz. khim. 37 no.4:893-895 Ap '63. (MIRA 17:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ACC NR: AP6029048 (A) SOURCE CODE: UR/0413/66/000/014/0072/0072

INVENTORS: Vorob'yeva, O. V.; Bessonova, Ye, S.; Arshakyan, A. M.

ORG: none

TITLE: A method for preparing colored heat-shielding glass. Class 32, No. 183914

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 72

TOPIC TAGS: glass, tin, titanium, antimony, iron oxide, safety glass

ABSTRACT: This Author Certificate presents a method for preparing colored heat-shielding glass by depositing a film of iron oxide on a glass base heated to 550—650C. This is accomplished by aerosol atomizing aqueous or hydrochloric acid solutions of iron salts containing 15—50% of film-forming salt. To improve the reflectivity in the infrared spectral range, up to 10% of oxides of the elements in the fourth and fifth groups of the periodic table (for instance, tin, titanium, or antimony) are introduced to the film-forming solution.

SUB CODE: 11/ SUBM DATE: 22Jan64

Card 1/1 UDC: 666.1.056

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

KARAPETYAN, S.K.; ARSHAKYAN, A.V.

Physiological effect of feeding green standing grass to laying poultry. Izv. AN Arm. SSR. Biol. i sel'khoz. nauki 11 no. 5:3-8 My '58. (MIRA 11:7)

(Poultry--Feeding and feeding stuffs)
(Grasses)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

KARAPETYAN, S.K.; ARSHAKYAN, A.V.

External inhibition of unconditioned reflexes of egg laying in poultry related to changes in a fixed environment. Izv. AN Arm. SSR. Biol. nauki 15 no;3:3-13 '62. (MIRA 15:4)

1. Institut fiziologii imeni akademika L.A.Orbeli AN Armyanskoy SSR.

(EGGS--PRODUCTION)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

ARSHAKYAN, A.V.

Change in the conditioned reflex activity of domestic birds after changing the established stereotype of keeping conditions. Izv. AN Arm. SSR. Biol. nauki 16 no.12:39-45 D '63. (MIRA 17:2)

1. Institut fiziologii imeni akademika L.A. Orbeli AN Armyanskoy SSR.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

KARAPETYAN, S.K., akademik; ARSHAKYAN, A.V.

Change in the conditioned response activity of domestic birds due to a disruption of the established stereotype of maintenance. Dokl. AN SSSR 153 no.1:237-239 N '63.
(MIRA 17:1)

1. Institut fiziologii im. L.A. Orbeli AN ArmSSR. 2. AN ArmSSR (for Karapetyan).

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210013-1

[redacted], V.V.

New data on the effect of prolonged exposure to light on the conditioned reflex activity in domestic birds. Zav. Ob Arm. S.R. Med. zhur. 17 no.10:75-81 O '62. (MIRA 18:8)

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